

KARIN J. IMMERGUT (OSB No. 96314)
United States Attorney
District of Oregon

STEPHEN J. ODELL (OSB No. 90353)
Assistant United States Attorney
1000 S.W. Third Avenue, Suite 600
Portland, OR 97204-2902
(503) 727-1194 (tel) / (503) 727-1117 (fax)

JOHN C. CRUDEN
Acting Assistant Attorney General
MARK A. NITCZYNSKI (CSB 20687)
mark.nitczynski@usdoj.gov
U.S. Department of Justice/ENRD
1961 Stout Street - 8th Floor
Denver, CO 80294
(303) 844-1498 (tel)/(303) 844-1350 (fax)
MEREDITH L. FLAX (DCB 468016)
meredith.flax@usdoj.gov
U.S. Department of Justice
Environment & Natural Resources Division
Wildlife & Marine Resources Section
Ben Franklin Station, P.O. Box 7369
Washington, D.C. 20044-7369
(202) 305-0404 (tel) / (202) 305-0275 (fax)

Attorneys for Federal Defendants

UNITED STATES DISTRICT COURT
DISTRICT OF OREGON

NORTHWEST ENVIRONMENTAL
ADVOCATES, a non-profit corporation,

Civ. No. 05-1876-HA

Plaintiff,

v.

UNITED STATES' NOTICE OF FILING
U.S. FISH AND WILDLIFE SERVICE'S
AMENDED ADMINISTRATIVE
RECORD AND INDEX

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY, NATIONAL
MARINE FISHERIES SERVICE, and
UNITED STATES FISH AND WILDLIFE
SERVICE,

Defendants.

Pursuant to the Court's February 11, 2009 Opinion and Order (Docket No. 175), notice is provided to the Court and the parties that the United States is hereby filing the Certification of Amended Administrative Record for the United States Fish and Wildlife Service ("FWS"), along with the index for the record. The certification and index are attached hereto as Attachment A. FWS's Log of Excluded Documents is attached hereto as Attachment B.

Pursuant to Local Civil Rule 100.4(f), FWS's amended administrative record will not be filed using the Court's Electronic Case Filing system. Accordingly, notice also is provided that, on May 1, 2009, the United States is sending for filing with this Court one compact disc that contains FWS's amended administrative record. The United States also is sending a courtesy copy of the compact disc for Judge Haggerty's chambers. Copies of the compact disc also are being sent today to counsel identified on the Certificate of Service.

Respectfully submitted,

JOHN C. CRUDEN

Acting Assistant Attorney General
Environment & Natural Resources Division

/s/ Meredith L. Flax

MEREDITH L. FLAX (DCB 468016)
United States Department of Justice
P.O. Box 7369
Washington, DC 20044-7369
(202) 305-0404
E-mail: meredith.flax@usdoj.gov

MARK A. NITCZYNSKI (CSB 20687)
U.S. Department of Justice/ENRD
1961 Stout Street - 8th Floor
Denver, CO 80294
(303) 844-1498
E-mail: mark.nitczynski@usdoj.gov

Attorneys for United States of America

Dated: May 1, 2009

CERTIFICATE OF SERVICE

I hereby certify that on May 1, 2008, I caused a true copy of the foregoing UNITED STATES' NOTICE OF FILING FWS'S AMENDED ADMINISTRATIVE RECORD AND INDEX (with attachments) to be served on each of the following counsel in the manner indicated below:

Daniel P. Mensher
PACIFIC ENVIRONMENTAL
ADVOCACY CENTER
10015 S.W. Terwilliger Blvd.
Portland, OR 97219
dmensher@lclark.edu

☐ Via Hand Delivery
☐ Via E-mail
☐ Via First-Class mail, postage pre-paid
☐ Via Overnight Mail
☒ Court notice of electronic filing via
CM/ECF

Alison LaPlante
PACIFIC ENVIRONMENTAL
ADVOCACY CENTER
10015 S.W. Terwilliger Blvd.
Portland, OR 97219
laplante@lclark.edu

☐ Via Hand Delivery
☐ Via E-mail
☐ Via First-Class mail, postage pre-paid
☐ Via Overnight Mail
☒ Court notice of electronic filing via
CM/ECF

Karen Moynahan
Oregon Department of Justice
1162 Court St., NE
Salem, OR 97301-4096
karen.moynahan@doj.state.or.us

☐ Via Hand Delivery
☐ Via E-mail
☐ Via First-Class mail, postage pre-paid
☐ Via Overnight Mail
☒ Court notice of electronic filing via
CM/ECF

Laura Maffei, R.G.
Attorney at Law
Schwabe Williamson & Wyatt
1211 SW 5th Ave., Suites 1600-1900
Portland, OR 97204
Lmaffei@SCHWABE.com

☐ Via Hand Delivery
☐ Via E-mail
☐ Via First-Class mail, postage pre-paid
☐ Via Overnight Mail
☒ Court notice of electronic filing via
CM/ECF

/s/ Meredith L. Flax
MEREDITH L. FLAX

ATTACHMENT A

UNITED STATES' NOTICE OF FILING AMENDED
ADMIN. RECORD AND INDEX FOR FWS

KARIN J. IMMERGUT (OSB No. 96314)
United States Attorney
STEPHEN J. ODELL (OSB No. 90353)
Assistant United States Attorney
District of Oregon
1000 S.W. Third Avenue
Portland, OR 97204-2902
(503) 727-1100 (tel) / (503) 727-1117 (fax)

JOHN C. CRUDEN
Acting Assistant Attorney General
Environment & Natural Resources Division

MARK A. NITCZYNSKI (CSB 20687)
mark.nitczynski@usdoj.gov
U.S. Department of Justice/ENRD
1961 Stout Street - 8th Floor
Denver, CO 80294
(303) 844-1498 (tel)/ (303) 844-1350 (fax)
MEREDITH L. FLAX (DCB 468016)
meredith.flax@usdoj.gov
U.S. Department of Justice
Environment & Natural Resources Division
Wildlife & Marine Resources Section
Ben Franklin Station, P.O. Box 7369
Washington, D.C. 20044-7369
(202) 305-0404 (tel) / (202) 305-0275 (fax)

Attorneys for United States of America

UNITED STATES DISTRICT COURT
DISTRICT OF OREGON

| | |
|--|--|
| <p>NORTHWEST ENVIRONMENTAL ADVOCATES, a non-profit corporation,</p> <p style="text-align: center;">Plaintiff,</p> <p style="text-align: center;">v.</p> <p>UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, NATIONAL MARINE FISHERIES SERVICE, and UNITED STATES FISH AND WILDLIFE SERVICE,</p> <p style="text-align: center;">Defendants.</p> | <p>Civ. No. 05-1876-HA</p> <p>CERTIFICATION OF AMENDED ADMINISTRATIVE RECORD FOR THE U.S. FISH AND WILDLIFE SERVICE'S BIOLOGICAL OPINION</p> |
|--|--|

I, Elizabeth Materna, declare as follows:

1. I am employed as a fish and wildlife biologist for the U.S. Fish and Wildlife Service (FWS) in the Oregon Fish and Wildlife Office, located in Portland, Oregon.
2. My duties include assembling and maintaining the administrative record for the FWS's biological opinion on the Environmental Protection Agency's proposed approval of revised Oregon water quality standards for temperature, intergravel dissolved oxygen, and antidegradation, dated February 24, 2004.
3. In compliance with the Court's order dated February 11, 2009, the FWS has reconsidered its assertion of the deliberative process privilege with respect to certain documents, and has determined that 20 of those documents should be added to the record, including eight that the Court ordered released, and another twelve that the FWS has determined would not be considered to be privileged based on the standards enunciated in the Court's order. In addition, in August, 2008, the FWS agreed to add to its record nine documents it previously had included on its privilege log, and provided copies of those to plaintiff.

The FWS has amended its administrative record accordingly, and the record filed herewith includes the documents listed in the original index filed with the Court in June, 2006, the supplemental documents filed in March, 2008, and the 29 documents described above.

4. I certify that the documents reproduced and indexed on the compact disk filed herewith comprise the complete administrative record for this biological opinion, as determined to the best of my ability.
5. I make this declaration pursuant to 28 U.S.C. § 1746. I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Executed on April 22, 2009, at Portland, Oregon.

A handwritten signature in cursive script, appearing to read "Elizabeth Materna", written over a horizontal line.

ELIZABETH MATERNA

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|--|---------------------|---------------------|--|
| Original Administrative Record dated June 5, 2006 | | | |
| Biological Opinion and Supporting Documents | | | |
| 1 | 00001-00101 | 2/25/2004 | Letter from Oregon Fish and Wildlife Office (OFWO) to Randall F. Smith, US Environmental Protection Agency (EPA) re: Biological opinion; EPA's proposed approval of revised Oregon water quality standards for temperature, intergravel dissolved oxygen and antidegradation |
| 2 | 00102-00195 | 2/24/2004 | Fish and Wildlife Service (FWS) Biological Opinion (BO) for EPA's Proposed Approval of Revised Oregon Water Quality Standards for Temperature, Intergravel Dissolved Oxygen, and Antidegradation |
| 3 | 00196-00199 | 2/4/2004 | Letter faxed from Michael T. Llewelyn, Oregon Department of Environmental Quality (ODEQ) to Randy Smith, EPA re: ODEQ Response to EPA Questions re the OR water quality temperature standards |
| 4 | 00200-00219 | 12/19/2003 | Oregon Department of Fish and Wildlife (ODFW) - Non-Anadromous Species Timing Unit tables |
| 5 | 00220-00311 | 11/10/2003 | ODEQ Water Pollution Division 41 Water Quality Standards: Beneficial uses, policies, and criteria for Oregon |
| 6 | 00312-00317 | Nov-03 | ODEQ Beneficial Use Designations, Fish Uses: Table 190B, 250B, 121B, 101B, and 140B |
| 7 | 00318-00319 | 10/14/2003 | Meeting Notes for October 14, 2003 Beneficial Use Group |
| 8 | 00320-00323 | 10/2/2003 | Letter from FWS, OFWO to Emily Smith, ODEQ re: Comments on proposed revisions to ODEQ Division 41 Water Quality Standards |
| 9 | 00324-00325 | 5/28/2003 | Meeting Notes written by Elizabeth Materna, FWS, for Where and When Team |
| 10 | 00326-00330 | 5/27/2003 | ODFW Life stage Timing Criteria, Definitions, and Questions |
| 11 | 00331-00335 | 5/9/2003 | Draft Temperature Standard Options |
| 12 | 00336-00340 | 4/21/2003 | Letter from FWS to John Lani, EPA re: Comments on the final version of EPA Region 10 Guidance for State and Tribal Temperature Water Quality Standards |
| 13 | 00341-00342 | 11/29/2002 | Federal Register / Vol. 67, No. 230 / Friday, November 29, 2002 / Proposed Rules Bull Trout 71265 |
| 14 | 00343-00357 | 11/29/2002 | Federal Register Department of Interior Fish and Wildlife Service 50 CFR Part 17; Proposed Designation of Critical Habitat for the Klamath River and Columbia River District Population Segments of Bull Trout and Notice of Availability of the Draft Recovery Plan |
| 15 | 00358-00371 | 9/19/2002 | Myrick, C.A. 2002. Bull Trout Temperature Thresholds Peer Review Summary. Prepared for US Fish and Wildlife Service, Lacey, Washington |
| 16 | 00372-00432 | 7/1/1999 | Letter/BO from FWS OFWO to Randall F. Smith, EPA re: Oregon water quality standards ESA consultation |
| 17 | 00433-00434 | No Date | FWS Bull Trout Issue - General Background, Basin Specific Information |
| 18 | 00435-00438 | No Date | ODEQ Table 190B Beneficial use designations, Fish Uses, Malheur Lake Basin, Oregon: FWS Lahontan Cutthroat Trout distribution maps |
| E-Mail Messages | | | |
| 19 | 00439-00439 | 2/23/2004 | Email from Rollie White, FWS, to Elizabeth Materna, FWS, re: Amount of take in the biological opinion, with one attachment |
| 20 | 00440-00441 | 2/23/2004 | Attachment: Edits to the BO on the Effect of Take |
| 21 | 00442-00442 | 2/20/2004 | Email from Jesse Delia, FWS, to Elizabeth Materna, FWS, re: Bull trout consulted-on effects, with one attachment |
| 22 | 00443-00469 | 2/20/2004 | Attachment: Consulted-on effects that have been analyzed through section 7 consultation as reported in a biological opinion |

**Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004**

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---------------------------|-----------------------------|-----------------------------|--|
| <u>23</u> | 00470-00470 | 2/19/2004 | Email from Anne Walker, FWS, to Elizabeth Materna, FWS, re: 2003 bull trout survey results above and below the Clear branch dam, with one attachment |
| <u>24</u> | 00471-00581 | 2/19/2004 | Attachment: Mt Hood recovery unit chapter of the bull trout recovery plan |
| <u>25</u> | 00582-00582 | 2/19/2004 | Email from Cat Brown, FWS, to Elizabeth Materna, FWS, re: Oregon chub consultation history, with one attachment |
| <u>26</u> | 00583-00584 | 2/19/2004 | Attachment: Previous biological opinions for Oregon Chub |
| <u>27</u> | 00585-00585 | 2/17/2004 | Email from Chris Allen, FWS, to Elizabeth Materna, FWS, re: Upper McKenzie Redd survey for fall 2003, with one attachment |
| <u>28</u> | 00586-00587 | 2/17/2004 | Attachment: Upper McKenzie Redd count Bull trout and Chinook, October 7, 2003 |
| <u>29</u> | 00588-00588 | 2/17/2004 | Email from Chris Allen, FWS, to Elizabeth Materna, FWS, re: Annual report from ODFW, spawning survey data for bull trout Carmen Dam, with one attachment |
| <u>30</u> | 00589-00616 | 2/17/2004 | Attachment: Bull trout population monitoring in the McKenzie and Middle Fork Willamette Rivers, Annual Progress Report 2002 |
| <u>31</u> | 00617-00618 | 2/17/2004 | Email from Chris Allen, FWS, to Elizabeth Materna, FWS, re: McKenzie bull trout Redd count 2003, with one attachment |
| <u>32</u> | 00619-00619 | 2/17/2004 | Attachment: Redd table from year 1989 to 2003 |
| <u>33</u> | 00620-00620 | 2/10/2004 | Email from Kellie Kubena, EPA, to Marylou Soscia, EPA re: Bull trout spawning below dams |
| <u>34</u> | 00621-00626 | 1/29/2004 | Email from John Stephenson, FWS, to Bianca Streif, FWS, re: Bull trout fry emergence in the Umatilla and Walla Walla basins |
| <u>35</u> | 00627-00630 | 1/29/2004 | Email from Debra Sturdevant, ODEQ, to Elizabeth Materna, FWS, re: ODEQ temperature letter |
| <u>36</u> | 00631-00632 | 1/28/2004 | Email from Bianca Streif, FWS to Elizabeth Materna, FWS, re: Fry emergence in John Day, Malheur and Willamette |
| <u>37</u> | 00633-00634 | 1/27/2004 | Email from Bianca Streif, FWS to Elizabeth Materna, FWS, re: Fry emergence in Imnaha |
| <u>38</u> | 00635-00636 | 1/27/2004 | Email from Bianca Streif, FWS to Elizabeth Materna, FWS, re: Fry emergence in the Deschutes |
| <u>39</u> | 00637-00638 | 1/27/2004 | Email from Peter Lickwar, FWS, to Elizabeth Materna, FWS, re: Bull trout spawning, with one attachment |
| <u>40</u> | 00639-00797 | 1/27/2004 | Attachment: PGE's Draft Pelton Round Butte hydroelectric project supplemental biological evaluation, January 16, 2004 |
| <u>41</u> | 00798-00798 | 1/27/2004 | Email from Debra Sturdevant, ODEQ, to Elizabeth Materna, FWS, re: Table of the spawning through emergence times for bull trout by basin and sub-basin, with one attachment |
| <u>42</u> | 00799-00800 | 1/27/2004 | Attachment: Bull trout life stage timing |
| <u>43</u> | 00801-00801 | 1/14/2004 | Email from Bianca Streif, FWS to Elizabeth Materna, FWS, re: Bull trout spawning |
| <u>44</u> | 00802-00803 | 1/6/2004 | Email from Doug Young, FWS, to Elizabeth Materna, FWS, re: Spawning dates |
| <u>45</u> | 00804-00804 | 12/18/2003 | Email from Carmen Thomas, FWS, Elizabeth Materna, FWS, re: Bull trout in Hells Canyon or Oxbow Reservoir |
| <u>46</u> | 00805-00806 | 12/17/2003 | Email from Dru Keenan, EPA, to Elizabeth Materna, FWS re: Draft conservation measures please review with two attachments |
| <u>47</u> | 00807-00810 | 12/17/2003 | Email from Dru Keenan, EPA to Elizabeth Materna, FWS re: Oregon clarification letter, attachment duplicate of first 12/17/03 email from EPA |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|--------------------|------------------|------------------|--|
| 48 | 00811-00812 | 12/16/2003 | Email from Debra Sturdevant, ODEQ, to Elizabeth Materna, FWS, re: Error in rule |
| 49 | 00813-00813 | 12/15/2003 | Email from Debra Sturdevant, ODEQ, to Dru Keenan, EPA, Lahontan cutthroat trout habitat information |
| 50 | 00814-00814 | 12/15/2003 | Email from Chris Allen, FWS, to Elizabeth Materna, FWS, re: Modoc suckers only found in the Goose Lake Basin |
| 51 | 00815-00815 | 12/11/2003 | Email from Chris Allen, FWS, to Elizabeth Materna, FWS, re: Bull trout status for the Willamette BO, with one attachment |
| 52 | 00816-00855 | 12/11/2003 | Attachment: Willamette BO: bull trout status of the species and critical habitat |
| 53 | 00856-00857 | 12/10/2003 | Email from Rollie White, FWS, to Elizabeth Materna, FWS, re: conservation measures |
| 54 | 00858-00859 | 11/20/2003 | Email from Dru Keenan, EPA, to Elizabeth Materna, FWS re: Options for bull trout spawning below dams |
| 55 | 00860-00860 | 11/20/2003 | Attachment: Options for bull trout spawning below dams |
| 56 | 00861-00861 | 11/20/2003 | Email from Anne Walker, FWS, to Elizabeth Materna, FWS, re: Phone record for temperatures above and below the Laurance lake, with one attachment |
| 57 | 00862-00862 | 11/20/2003 | Attachment: Phone record with Mt. Hood National Forest, re: bull trout spawn below the dam (Laurance Lake) |
| 58 | 00863-00863 | 11/20/2003 | Email from Debra Sturdevant, ODEQ, to Elizabeth Materna, FWS, re: Powerpoint maps for Lahontan, with one attachment |
| 59 | 00864-00867 | 11/20/2003 | Attachment: Lahontan cutthroat trout, brown trout, Alvord and Borax chub maps |
| 60 | 00868-00868 | 11/18/2003 | Email from Anne Walker, FWS, to Elizabeth Materna, FWS, re: Mt Hood bull trout status in the revised draft recovery plan, with one attachment |
| 61 | 00869-00875 | 11/18/2003 | Attachment: Mt Hood bull trout status in the revised draft recovery plan |
| 62 | 00876-00876 | 11/7/2003 | Email from Debra Sturdevant, ODEQ, to Robert Anderson, NMFS, re: Revised draft of Findings of ODEQ's Technical Advisory Committee on Water Quality Criteria for Temperature, with one attachment |
| 63 | 00877-00895 | 11/7/2003 | Attachment: A Summary of the Discussion and Findings of ODEQ's Technical Advisory Committee on Water Quality Criteria for Temperature |
| 64 | 00896-00898 | 11/5/2003 | Email from Anne Walker, FWS, to Elizabeth Materna, FWS, re: Holy Heat Sump, concerns with winter temperatures below dams |
| 65 | 00899-00904 | 11/4/2003 | Email from Anne Walker, FWS to Elizabeth Materna, FWS re: Holy Heat Sump; temperature below Clear Branch Dam during the winter |
| 66 | 00905-00906 | 11/3/2003 | Email from Elizabeth Materna, FWS to Dru Keenan, EPA re: Notes from 10/28 meeting - key unresolved issues with one attachment |
| 67 | 00907-00907 | 11/3/2003 | Attachment: Draft meeting notes from where and when meeting October 28, 2003 |
| 68 | 00908-00908 | 11/3/2003 | Email from Debra Sturdevant, ODEQ to Jeff Lockwood re: Notes from 10/28 meeting; key unresolved issues |
| 69 | 00909-00910 | 10/27/2003 | Email from Jeff Lockwood, NMFS to Debra Sturdevant, OSU re: Final notes from 10/14 where and when meeting, with one attachment |
| 70 | 00911-00912 | 10/27/2003 | Attachment: Meeting notes for October 14, 2003, beneficial use group |
| 71 | 00913-00915 | 10/22/2003 | Email from Tracy Harrison, ODEQ to Debra Sturdevant, ODEQ, re: Date ranges for the migration (BTHD-2) and potential migration (BTHD-4) in the Klamath, Powder and Malheur river basins, with two attachments |
| 72 | 00916-00916 | 10/22/2003 | Attachment 1: Malheur Bull trout map |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|--------------------|------------------|------------------|---|
| 73 | 00917-00917 | 10/22/2003 | Attachment 2: Klamath Bull trout map |
| 74 | 00918-00918 | 10/16/2003 | Email from Debra Sturdevant, ODEQ, to Elizabeth Materna, FWS, re: Data from streams with bull trout, with three attachments |
| 75 | 00919-00919 | 10/16/2003 | Attachment 1: Summary temperature data for sections of Metolius and Minam Rivers; low risk bull trout streams |
| 76 | 00920-00920 | 10/16/2003 | Attachment 2: Summary temperature data for sections of Metolius and Minam Rivers; low risk bull trout streams |
| 77 | 00921-00921 | 10/16/2003 | Attachment 3: Summary temperature data for the McKenzie river |
| 78 | 00922-00922 | 10/15/2003 | Email from Debra Sturdevant, ODEQ, to Elizabeth Materna, FWS, re: Rock creek data, with one attachment |
| 79 | 00923-00924 | 10/15/2003 | Attachment: Summary temperature data for Rock Creek in the Powder Basin |
| 80 | 00925-00928 | 10/2/2003 | Email from Shelley Spalding, FWS Lacey, Washington, to Elizabeth Materna, FWS, re: Status of the revised Oregon temperature standards |
| 81 | 00929-00930 | 9/25/2003 | Email from Elizabeth Materna, FWS, to Adrienne Allen, EPA, re: Bull trout spawning criteria issue from our draft bull trout recovery plan, October 2002 |
| 82 | 00931-00932 | 9/18/2003 | Email from Alan Mauer, FWS, to Elizabeth Materna, FWS, re: Bull trout question related to Oregon temperature criteria |
| 83 | 00933-00933 | 9/18/2003 | Email from John Bowerman, FWS, to Elizabeth Materna, FWS, re: Bull trout question related to Oregon temperature criteria |
| 84 | 00934-00934 | 9/17/2003 | Email from Carmen Thomas, FWS, Elizabeth Materna, FWS, re: Bull trout question related to Oregon temperature criteria |
| 85 | 00935-00935 | 9/10/2003 | Email from Elizabeth Materna, FWS to Dru Keenan, EPA re: Bull trout spawning times in the Pine River Basin |
| 86 | 00936-00938 | 8/12/2003 | Email from Debra Sturdevant, ODEQ, to Elizabeth Materna, FWS, re: Powder and Malheur summer max map changes |
| 87 | 00939-00939 | 8/11/2003 | Email from Elizabeth Materna, FWS, to Tracy Harrison, ODEQ, re: Powder and Malheur summer max map, with one attachment |
| 88 | 00940-00940 | 8/11/2003 | Attachment: Critical period fish use designations Powder and Malheur basins, Oregon; draft 8/8/03 map |
| 89 | 00941-00941 | 8/8/2003 | Email from Tracy Harrison, ODEQ to Chris Mebane, NMFS, re: Klamath summer max map, with one attachment |
| 90 | 00942-00942 | 8/8/2003 | Attachment: Critical period, fish use designations Klamath basin, Oregon, Draft 8/8/03 |
| 91 | 00943-00944 | 8/7/2003 | Email from Audrey Hatch, OSU to Elizabeth Materna, FWS, re: Pine creek basin, no timing information |
| 92 | 00945-00945 | 8/6/2003 | Email from Audrey Hatch, OSU to Elizabeth Materna, FWS, re: Pine Creek Basin, no timing information, with one attachment |
| 93 | 00946-00946 | 8/6/2003 | Attachment: ODFW Timing Table, Pine Creek non-anadromous species |
| 94 | 00947-00951 | 8/6/2003 | Email from Dru Keenan, EPA to Elizabeth Materna, FWS re: Timing of the bull trout spawning below reservoirs |
| 95 | 00952-00952 | 8/6/2003 | Email from John Palmer, EPA to Dru Keenan, EPA re: Final draft of where/when decision rules, with one attachment |
| 96 | 00953-00954 | 8/6/2003 | Attachment: Final draft of decision rules to designate pacific salmon and bull trout beneficial uses in Oregon |
| 97 | 00955-00955 | 8/5/2003 | Email from Alan Mauer, FWS, to Elizabeth Materna, FWS, re: Lahontan cutthroat trout temperatures |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---------------------|------------------|------------------|---|
| 98 | 00956-00956 | 8/5/2003 | Email from Alan Mauer, FWS, to Elizabeth Materna, FWS, re: Lahontan cutthroat trout contacts |
| 99 | 00957-00958 | 8/4/2003 | Email from Debra Sturdevant, ODEQ, to Elizabeth Materna, FWS, re: Classification of the non-anadromous endangered species |
| 100 | 00959-00959 | 8/1/2003 | Email from Jeff Lockwood, NMFS to Dru Keenan, EPA re: Meeting notes from conference call on 07/30/03, with one attachment |
| 101 | 00960-00961 | 8/1/2003 | Attachment: Notes from where and when conference call 07/30/03 |
| 102 | 00962-00964 | 7/31/2003 | Email from Debra Sturdevant, OSU to Chris Mebane, NMFS re: Prime, sub-prime or cooler habitat |
| 103 | 00965-00965 | 7/30/2003 | Email from Dru Keenan, EPA to Elizabeth Materna, FWS re: Spawning rules II, with one attachment |
| 104 | 00966-00967 | 7/30/2003 | Attachment: Draft version 2 spawning rules |
| 105 | 00968-00969 | 7/29/2003 | Email from Chris Mebane, NMFS to Tracy Harrison, ODEQ re: Please respond revised decision rules, with one attachment |
| 106 | 00970-00971 | 7/29/2003 | Attachment: Decision rule for mapping salmonid uses 7/28/03 revision |
| 107 | 00972-00972 | 7/28/2003 | Email from Jennifer Weaver, ODEQ, to Bill Blosser, re: Last call on Division 41 revisions, with one attachment |
| 108 | 00973-01060 | 7/28/2003 | Attachment: Draft #5 (July 28, 2003) ODEQ water pollution Division 41 water quality standards: beneficial uses, policies, and criteria for Oregon |
| 109 | 01061-01061 | 7/25/2003 | Email from Cedric Cooney, OSU, to Bill Bogue, EPA, re: Response to questions from the July 15-16 where/when meeting, with one attachment |
| 110 | 01062-01066 | 7/25/2003 | Attachment: Questions with answers from the EPA When/Where meeting on July 15th and 16th |
| 111 | 01067-01068 | 7/25/2003 | Email from Debra Sturdevant, ODEQ to William Bogue, EPA, re: Bull trout proposal, ODEQ, ODFW, and FWS data overlay, with one attachment |
| 112 | 01069-01118 | 7/25/2003 | Attachment: Bull Trout Habitat Designation Technical Work Group Recommendations, Final July 2003 |
| 113 | 01119-01121 | 7/25/2003 | Email from Debra Sturdevant, ODEQ to John Palmer, EPA re: New spawning proposal |
| 114 | 01122-01122 | 7/24/2003 | Email from Emily Smith, ODEQ, to William Bogue, EPA, re: Bull trout issues |
| 115 | 01123-01124 | 7/23/2003 | Email from John Palmer, EPA to Chris Mebane, NMFS, re: New spawning proposal |
| 116 | 01125-01126 | 7/22/2003 | Email from Emily Smith, ODEQ, to Elizabeth Materna, FWS, re: Bull trout critical habitat map changes |
| 117 | 01127-01129 | 7/22/2003 | Email from Debra Sturdevant, ODEQ to William Bogue, EPA re: Bull trout spawning mapping and assigning values to diversions with one attachment |
| 118 | 01130-01130 | 7/22/2003 | Attachment: Preliminary John Day basin summer maximum stream temperature criteria for protection of salmon and trout core rearing and migration and bull trout spawning map |
| 119 | 01131-01131 | 7/15/2003 | Email from John Bowerman, FWS, to Elizabeth Materna, FWS, re: Minor changes to bull trout critical habitat in the Klamath Basin |
| 120 | 01132-01132 | 7/14/2003 | Email from Carmen Thomas, FWS to Elizabeth Materna, FWS re: Revisions to the proposed critical habitat map for the recovery unit |
| 121 | 01133-01133 | 7/11/2003 | Email from Dru Keenan, EPA to Elizabeth Materna, FWS re: Decision rules justifications assumptions, with one attachment |
| 122 | 01134-01135 | 7/11/2003 | Attachment: Decision rule assumptions to date |
| 123 | 01136-01136 | 7/10/2003 | Email from Alan Mauer, FWS to Elizabeth Materna, FWS re: Revisions to the proposed critical habitat map for the recovery unit |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|--------------------------------------|------------------|------------------|--|
| 124 | 01137-01138 | 7/7/2003 | Email from Debra Sturdevant, ODEQ, to Elizabeth Materna, FWS, re: Temperature standard issues to resolve |
| 125 | 01139-01141 | 7/7/2003 | Attachment: Temperature standard issues |
| 126 | 01142-01170 | 7/7/2003 | Attachment: July 7 draft temperature rule language |
| 127 | 01171-01174 | 7/1/2003 | Email from Elizabeth Materna, FWS, to Carmen Thomas, FWS, re: Reservoirs in the Pine Creek Basin |
| 128 | 01175-01178 | 7/1/2003 | Email from Carmen Thomas, FWS to Elizabeth Materna, FWS re: Mehlhorn and Clear creek reservoirs |
| 129 | 01179-01180 | 6/26/2003 | Email from Debra Sturdevant, ODEQ, to John Palmer, EPA, re: Willamette basin 18/16 rule |
| 130 | 01181-01182 | 6/23/2003 | Email from Paul Bridges, FWS, to Elizabeth Materna, FWS, re: bull trout spawning below reservoirs |
| 131 | 01183-01184 | 6/19/2003 | Email from Anne Walker, FWS, to Elizabeth Materna, FWS, re: bull trout spawning below reservoirs |
| 132 | 01185-01186 | 6/18/2003 | Email from Chris Allen, FWS, to Elizabeth Materna, FWS, re: bull trout spawning below reservoirs |
| Data Considered but not Cited | | | |
| 133 | 01187-01187 | 11/5/2003 | ODEQ Draft Grande Ronde Spawning map, 11/05/2003 draft |
| 134 | 01188-01188 | 11/5/2003 | ODEQ Draft Grande Ronde Summer Max map, 11/05/2003 draft |
| 135 | 01189-01189 | 11/5/2003 | ODEQ Draft Klamath Summer Max map, 11/05/2003 draft |
| 136 | 01190-01190 | 11/5/2003 | ODEQ Draft Malheur Summer Max map, 11/05/2003 draft |
| 137 | 01191-01196 | 10/1/2003 | Chandler, J.A., M.A. Fedora, and T.R. Walters. 2001. Pre- and Post-Spawn Movements and Spawning Observations of Resident Bull Trout in the Pine Creek Watershed, Eastern Oregon. In Brewin, M.K., A.J. Paul, and M. Mond+E327a, eds. Bull Trout II Conference Proceedings 167-172. |
| 138 | 01197-01214 | 7/7/2003 | FWS draft bull trout maps with ODEQ overlay and written comments. |
| 139 | 01215-01216 | 5/19/2003 | Data Inventory of Salmonid Life Stage Distribution and Timing |
| 140 | 01217-01312 | Jan-03 | ODEQ, Final Temperature Study in the John Day Basin for 2001 |
| 141 | 01313-01313 | 11/29/2002 | Federal Register Notice, Vol. 67. No. 230, Proposed Rule bull trout critical habitat Unit 5-Hood River Basin map with written comments |
| 142 | 01314-01380 | 1/31/2001 | Summary Report: State conservation measure 7 year 2000 field study of anadromous salmonid spawning season water temperature regimes in the Imnaha river basin: series of summary temperature graphs for Weneha and Imnaha Rivers and Catherine Creek |
| 143 | 01381-01389 | 6/22/2001 | ODEQ Temperature Data - McKenzie River at Dearborn Is Rd bridge above South Fork McKenzie RM 60 |
| 144 | 01390-01391 | 6/22/2001 | ODEQ Temperature Data - Horse Creek at bridge on Horse Cr Rd |
| 145 | 01392-01394 | 6/2/2001 | ODEQ Temperature Data - McKenzie River at Ranger Station |
| 146 | 01395-01397 | 5/30/2001 | ODEQ Temperature Data - McKenzie River above Trail bridge Reservoir |
| 147 | 01398-01400 | 5/19/2001 | ODEQ Temperature Data - RM 29.02 Metolius River u/s of Bridge 99 |
| 148 | 01401-01403 | 5/19/2001 | ODEQ Temperature Data - RM38.27 Metolius River d/s of Tract C Bridge |
| 149 | 01404-01406 | 5/9/2001 | ODEQ Temperature Data - Metolius River North of Camp Sherman Bridge 99 |
| 150 | 01407-01410 | 5/9/2001 | ODEQ Temperature Data - Metolius River u/s of mouth of Canyon Creek |
| 151 | 01411-01413 | 5/9/2001 | ODEQ Temperature Data - RM 38.34 Metolius River at Track C Bridge |
| 152 | 01414-01416 | 5/9/2001 | ODEQ Temperature Data - RM 31.47 Metolius River at old water intake pipe near Wizard Falls Fish Hatchery |
| 153 | 01417-01423 | 12/20/2000 | ODEQ Temperature Data - South Fork McKenzie River Near Rainbow, OR |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|-------------------------|------------------|------------------|--|
| 154 | 01424-01425 | Sep-98 | ODEQ Temperature Data - Powder River Basin, Rock Creek u/s of Camp Lee |
| 155 | 01426-01427 | 7/9/1998 | ODEQ Temperature Data - SF McKenzie River at Natl. Forest Rte. 19 Bridge |
| 156 | 01428-01429 | 1998 | ODEQ Temperature Data - Wenaha Subbasin- 1998 |
| 157 | 01430-01432 | 8/1/1996 | ODEQ Temperature Data - Blue River at Blue River Drive |
| 158 | 01433-01435 | 8/1/1996 | ODEQ Temperature Data - McKenzie River at Hwy 126 btwn Koosah Falls and Clear Lake |
| 159 | 01436-01438 | No Date | ODEQ Temperature Data - RM 11.94 Metolius River u/s of Gauging Station |
| 160 | 01439-01441 | No Date | ODEQ Temperature Data - RM 35.45 Metolius River at Gorge Campground |
| 161 | 01442-01444 | No Date | ODEQ Temperature Data - RM 39.20 Metolius River d/s of headwater springs |
| 162 | 01445-01445 | No Date | Pacific Northwest Reservoir System |
| 163 | 01446-01446 | No Date | Map of Upper Klamath Basin |
| 164 | 01447-01447 | No Date | Changes needed to Draft Hood Recovery Unit and Critical Habitat map for finalization. |
| 165 | 01448-01450 | No Date | Information for Hood River Basin bull trout map |
| 166 | 01451-01456 | No Date | Comments of bull trout proposed critical habitat Hood River Basin |
| 167 | 01457-01459 | No Date | FWS Tables - List of current local bull trout populations in the North, Middle, and Upper John Day River sub watershed |
| 168 | 01460-01461 | No Date | FWS Table comparing 9 °C date with documented spawn times |
| Literature Cited | | | |
| 169 | 01462-01477 | 7/1/1996 | Batt, P.E., 1996. State of Idaho Bull Trout Conservation Plan. Office of the Governor, Boise, ID. |
| 170 | 01478-01509 | 1996 | Baxter, J.S. and J.D. McPhail. 1996. Bull trout spawning and rearing habitat requirements: summary of the literature. Fisheries technical circular no. 98. Fisheries Branch, British Columbia Ministry of Environment, Lands and Parks, Vancouver. |
| 171 | 01510-01516 | 1999 | Baxter, J.S. and J.D. McPhail. 1999. The influence of redd site selection, groundwater upwelling, and over-winter incubation temperature on survival of bull trout (<i>Salvelinus confluentus</i>) from egg to alevin. Canadian Journal of Zoology 77:1233-1239. |
| 172 | 01517-01618 | 12/5/1990 | Berman, C.H. 1990. Effect of elevated holding temperatures on adult spring chinook salmon reproductive success. MS Thesis. University of Washington. Seattle. |
| 173 | 01619-01669 | Sep-77 | Bjornn, T.C. 1977. Transport of Granitic Sediment in Streams and Its Effects on Insects and Fish. Research Technical Completion Report. Project B-036-IDA. |
| 174 | 01670-01675 | 1987 | Boag, T.D. 1987. Food habits of bull char, <i>Salvelinus confluentus</i> , and rainbow trout, <i>Salmo gairdneri</i> , coexisting in a foothills stream in northern Alberta. Canadian Field- Naturalist 101(1): 56-62. |
| 175 | 01676-01679 | 1992 | Bond, C.E. 1992. Notes on the nomenclature and distribution of the bull trout and the effects of human activity on the species. Pages 1-4 in Howell, P.J. and D.V. Buchanan, eds. Proceedings of the Gearhart Mountain bull trout workshop. Oregon Chapter of the American Fisheries Society, Corvallis, OR. |

**Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004**

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---------------------|-----------------------------|-----------------------------|---|
| 176 | 01680-01682 | 1996 | Bonneau, J.L. and D.L. Scarnecchia. 1996. Distribution of juvenile bull trout in a thermal gradient of a plunge pool in Granite Creek, Idaho. Transactions of the American Fisheries Society 125: 628-630. |
| 177 | 01683-01692 | 1997 | Brewin, P.A. and M. K. Brewin. 1997. Distribution Maps for Bull Trout in Alberta. Pages 209-216 in Mackay, W.C., M.K. Brewin and M. Monita. Friends of the bull Trout Conference Proceedings. |
| 178 | 01693-01805 | Mar-92 | Brown, L.G. 1992. On the zoogeography and life history of Washington native charr Dolly Varden (<i>Salvelinus malma</i>) and bull trout (<i>Salvelinus confluentus</i>). Washington Department of Wildlife, Fisheries Management Division Report, Olympia, Washington. |
| 179 | 01806-01814 | 1997 | Buchanan, D.V., and S.V. Gregory. 1997. Development of water temperature standards to protect and restore habitat for bull trout and other cold water species in Oregon. Pages 119-126 in Mackay, W.C., M.K. Brewin, and M. Monita, eds. Friends of the bull trout conference proceedings. Bull Trout Task Force (Alberta), do Trout Unlimited Canada, Calgary. |
| 180 | 01815-01999 | Oct-97 | Buchanan, D.V., M.L. Hanson, and R.M. Hooton. 1997. Status of Oregon's bull trout, distribution, life history, limiting factors, management considerations and status. Oregon Department of Fish and Wildlife. |
| 181 | 02000-02010 | Feb-03 | Carnefix, G. 2003. Montana's fish species of special concern: bull trout. |
| 182 | 02011-02029 | 1978 | Cavender, T. M. 1978. Taxonomy and distribution of the bull trout, <i>Salvelinus confluentus</i> (Suckley), from the American Northwest. California Fish and Game. |
| 183 | 02030-02038 | 1973 | Coutant, C.C. 1973. Effects of thermal shock on vulnerability of juvenile salmonids to predation. J. Fish. Res. Bd. Canada 30: 965-973. |
| 184 | 02039-02054 | 10/5/1994 | Crane, P.A., L.W. Seeb, and J.E. Seeb. 1994. Genetic relationships among <i>Salvelinus</i> species inferred from allozyme data. Canadian Journal of Fisheries and Aquatic Sciences 51:182-197. |
| 185 | 02055-02064 | 1993 | Donald, D.B. and D.J. Alger. 1993. Geographic distribution, species displacement, and niche overlap for lake trout and bull trout in mountain lakes. Canadian Journal of Zoology 71: 238-247. |
| 186 | 02065-02109 | 4/30/1999 | Dunham, J. 1999. Stream temperature criteria for Oregon's Lahontan cutthroat trout <i>Oncorhynchus clarki henshawi</i> - final report. Prepared for Oregon Department of Environmental Quality, Portland, OR. April 30, 1999. |
| 187 | 02110-02187 | Jan-98 | Flatter, B. 1998. Life history and population status of migratory bull trout (<i>Salvelinus confluentus</i>) in Arrowrock Reservoir, Idaho. Prepared for U.S. Bureau of Reclamation by Idaho Department of Fish and Game, Nampa, Idaho. |
| 188 | 02188-02290 | 1989 | Fraley, J.J., and B.B. Shepard. 1989. Life history, ecology and population status of migratory bull trout (<i>Salvelinus confluentus</i>) in the Flathead Lake and River System, Montana. Northwest Science 63(4): 133-143. |
| 189 | 02291-02325 | 1968 | Fulton, L.A. 1968. Spawning areas and abundance of Chinook salmon, <i>Oncorhynchus tshawytscha</i> , in the Columbia River basin — past and present. U.S. Fish and Wildlife Service, Special Scientific Report, Fisheries. 571:26. |
| 190 | 02326-02344 | 1996 | Gammett, B. 1996, Draft Part 2: Overview by Species. |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---------------------|------------------|------------------|--|
| 191 | 02345-02652 | May-99 | Gammett, B. 1999. The History and Status of Fisheries in the Little Lost River drainage, Idaho. Miscellaneous information contained in draft report. US Forest Service. |
| 192 | 02653-02657 | 8/16/1997 | Gilpin, M. 1997. Connectivity on the Clark Fork: The bigger picture. |
| 193 | 02658-02715 | Feb-89 | Goetz, F. 1989. Biology of the bull trout, <i>Salvelinus confluentus</i> , a literature review. Willamette National Forest. Eugene, Oregon. |
| 194 | 02716-02723 | 1990 | Greene, P.M., N. Billington, and P.D.N. Hebert. 1990. Phylogenetic relationships among members of <i>Salvelinus</i> inferred from Mitochondrial DNA divergence. Can. J. Fish. Aquat. Sci. 47: 984-991. |
| 195 | 02724-02744 | 1991 | Haas, G.R., and J.D. McPhail. 1991. Systematics and distributions of Dolly Varden (<i>Salvelinus malma</i>) and bull trout (<i>Salvelinus confluentus</i>) in North America. Can. J. Fish. Aquatic Sciences 48: 2191- 2211. |
| 196 | 02745-02811 | Jan-89 | Hoelscher, B. and T.C. Bjorn. 1989. Habitat, densities and potential production of trout and char in Pend Oreille Lake tributaries. Project F-71-R-10, Subproject III, Job No. 8. Idaho Department of Fish and Game, Boise, ID. |
| 197 | 02812-02881 | 1992 | Howell, P.J. and D.V. Buchanan, eds. 1992. Proceedings of the Gearhart Mountain bull trout workshop. Oregon Chapter of the American Fisheries Society, Corvallis, OR. Kann, J. 1998. Klamath Tribes, Chiloquin, Oregon. EPA personal communication. |
| 198 | 02882-03007 | May-95 | Jakober, M. 1995. Autumn and Winter Movement and Habitat Use of Resident Bull Trout and Westslope Cutthroat Trout in Montana. |
| 199 | 03008-03034 | Nov-96 | Klamath Tribes Natural Resources Department. 1996. Draft, A synopsis of the early life history and ecology of catostomids, with a focus on the Williamson River Delta |
| 200 | 03035-03040 | 1997 | Leary, R.F. and F.W. Allendorf. 1997. Genetic confirmation of sympatric bull trout and Dolly Varden in western Washington. Transactions of the American Fisheries Society 126:715-720. |
| 201 | 03041-03248 | Oct-82 | Leathe, S.A. and P. Graham. 1982. Flathead Lake Fish Food Habits Study. Environmental Protection Agency, through Steering Committee for the Flathead River Basin Environmental Impact Study. |
| 202 | 03249-03262 | 1993 | Maret, T.R., T.A. Burton, G.W. Harvey. and W.H. Clark. 1993. Field testing of new monitoring protocols to assess brown trout spawning habitat in an Idaho stream. N. Am. J. Fish. Man. 13:567-580. |
| 203 | 03263-03365 | Aug-88 | Mauser, G.R., R.W. Vogelsang, and C.L. Smith. 1988. Enhancement of Trout in Large North Idaho Lakes. Idaho Department of Fish and Game. Project # F-73-R-10. |
| 204 | 03366-03654 | 2/22/1999 | McCullough, D.A. 1999. A review and synthesis of effects of alterations to the water temperature regime on freshwater life stages of salmonids, with special reference to chinook salmon. Prepared for the U.S. Environmental Protection Agency, Region 10, Seattle, Washington. |
| 205 | 03655-03691 | 1996 | McPhail, J.D., and J.S. Baxter. 1996. A Review of Bull Trout (<i>Salvelinus confluentus</i>) Life-history and Habitat Use in Relation to Compensation and improvement Opportunities. University of British Columbia. Fisheries Management Report #104. |

**Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004**

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|----------------------------|-----------------------------|-----------------------------|---|
| <u>206</u> | 03692-03824 | Dec-79 | McPhail, J.D., and C.B. Murray. 1979. The early life-history and ecology of Dolly Varden (<i>Salvelinus malma</i>) in the Upper Arrow Lakes. Department of Zoology and Institute of Animal Resources, University of British Columbia, Vancouver, British Columbia. |
| <u>207</u> | 03825-03922 | Jul-93 | Monda, D. and M.K. Saiki. 1993. Tolerance of Juvenile Lost River and Shortnose Suckers to High pH, Ammonia concentration, and Temperature, and to Low Dissolved Oxygen concentration. USFWS Report for US Bureau of Reclamation. July 1995. |
| <u>208</u> | 03923-03930 | 1988 | Moyle, P. and J. Cech, Jr. 1988. Fishes: an introduction to ichthyology. Prentice Hall, Inc., New Jersey. |
| <u>209</u> | 03931-04096 | Jun-95 | ODEQ (Oregon Department of Environmental Quality). 1995. Dissolved Oxygen. Final Issue Paper. 1992-1994 Water quality standards review. Standards and Assessment Section, Portland, Oregon. |
| <u>210</u> | 04097-04119 | 4/26/2001 | ODEQ (Oregon Department of Environmental Quality). 2003. A Summary of the discussion and findings of ODEQ's Technical Advisory Committee on Water Quality Criteria for Temperature. Oregon Department of Environmental Quality, Portland, Oregon. |
| <u>211</u> | 04120-04132 | Jun-96 | ODFW (Oregon Department of Fish and Wildlife). 1996. Species at Risk: Sensitive, Threatened and Endangered Vertebrates of Oregon. ODFW, Portland. |
| <u>212</u> | 04133-04136 | 1989 | Phillips, R. B., K.A. Pleyte, and P.E. Ihssen. 1989. Patterns of chromosomal nuclear organizer region (NOR) variation in fishes of the genus <i>Salvelinus</i> . <i>Copeia</i> , 1989: 47-53. |
| <u>213</u> | 04137-04144 | 6/2/1992 | Pleyte, K.A., S.D. Duncan, and R. B. Phillips. 1992. Evolutionary relationships of the salmonids fish genus <i>Salvelinus</i> inferred from DNA sequences of the first internal transcribed spacer (ITS 1) of ribosomal DNA |
| <u>214</u> | 04145-04152 | 1992 | Pratt, K.L. 1992. A Review of bull trout life history. 00. 5-9. In Proceedings of the Gearhart Mountain Bull Trout Workshop, ed. Howell, P.J. and D.V. Buchanan. Gearhart Mountain, OR. Corvallis, OR: Oregon Chapter of the American Fisheries Society. August 1992. |
| <u>215</u> | 04153-04222 | 1985 | Pratt, K.L. 1985. Pend Oreille trout and char life history study. Idaho Department of Fish and Game, Boise, Idaho. |
| <u>216</u> | 04223-04422 | 12/1/1993 | Pratt, K.L., and J.E. Huston. 1993. Status of bull trout (<i>Salvelinus confluentus</i>) in Lake Pend Oreille and the lower Clark Fork River: (draft report) Prepared for the WWPC, Spokane, WA. |
| <u>217</u> | 04423-04430 | 1992 | Ratliff, D. E. and P.J. Howell, 1992. The status of bull trout populations in Oregon. Proceeding of the Gearhart mountain bull trout workshop. |
| <u>218</u> | 04431-04490 | May-96 | Rich, C.F., Jr. 1996. Influence of abiotic and biotic factors on occurrence of resident bull trout in fragmented habitats, western Montana. MS thesis, Montana State University, Bozeman, MT. |
| <u>219</u> | 04491-04500 | 2001 | Rieman, B.E. and F.W. Allendorf. 2001 (in press) Effective population size and Genetic conservation criteria for bull trout. |
| <u>220</u> | 04501-04508 | Nov-97 | Rieman, B., and J. Clayton. 1997. Wildfire and native fish: issues of forest health and conservation of sensitive species. <i>Fisheries</i> 22(1 1):6-15. |
| <u>221</u> | 04509-04547 | 2/16/1999 | Reiman, B., and G. Chandler. 1999. Empirical evaluation of temperature effects on bull trout distribution in the Northwest. Final Report. Contract No. 12957242-01-0. U.S. Environmental Protection Agency, Boise, ID. |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---------------------|------------------|------------------|--|
| 222 | 04548-04589 | Sep-93 | Rieman, B.E., and J.D. McIntyre. 1993. Demographic and habitat requirements of bull trout <i>Salvelinus confluentus</i> . General Technical Report INTGTR- 302. U.S. Department of Agriculture, Forest Service, Intermountain Research Station, Ogden, Utah. |
| 223 | 04590-04601 | May-95 | Rieman, B.E., and J.D. McIntyre. 1995. Occurrence of bull trout in naturally fragmented habitat patches of varied size. Transactions of the American Fisheries Society 124:285-296. |
| 224 | 04602-04611 | 1996 | Rieman, B.E. and J.D. McIntyre. 1996. Spatial and temporal variability in bull trout redd counts. North American J. of Fisheries Manage. 16: 132-141. |
| 225 | 04612-04615 | 1/30/1997 | Rieman, B.E. and D.L. Myers. 1997. Use of redd counts to detect trends in bull trout (<i>Salvelinus confluentus</i>) populations. Conservation Biology 11:1015-1018. |
| 226 | 04616-04630 | 1997 | Rieman, B.E., Lee, D. and R.F. Thurow. 1997. Distribution, status and likely future trends of bull trout within the Columbia River and Kiamath River basins. North American J. of Fisheries Manage. 17:1111-1125. |
| 227 | 04631-04911 | 2000 | Risser, P.O. 2000. Oregon State of the Environment Report. Oregon Progress Board. |
| 228 | 04912-04968 | 1998 | Scheerer P.D. and O. D. Apke. 1998. Oregon Chub Research (1997): Middle Fork Willamette and Santiam River Drainages. Annual Progress Report. Fish Research Projects. Oregon. |
| 229 | 04969-04992 | 1999 | Scheerer, P. 1999. Oregon chub research in the Willamette Valley 1991-1999. Oregon Department of Fish and Wildlife, Corvallis, OR. |
| 230 | 04993-05087 | 2000 | Scheerer, P. D and P.J. McDonald. 2000. Oregon Chub Research: Middle Fork Willamette and Santiam River Drainages. Contract #W66QKZ93345985. Oregon Department of Fish and Wildlife. Corvallis, Oregon. |
| 231 | 05088-05117 | 2003 | Scheerer, P., P.S. Kavanagh, and K. Jones. 2003. Oregon Department of Fish and Wildlife Annual Progress Report on Oregon chub. Project Number E-2-35. |
| 232 | 05118-05131 | 1986 | Scoppettone G.G. 1986. Upper Klamath Lake, Oregon Catostomid Research. Completion Report, U.S. Fish and Wildlife Service, National Fisheries Research Center, Seattle, WA |
| 233 | 05132-05147 | 1991 | Sedell, J.R. and R.L. Beshta. 1991. Bringing back the "bio" in bioengineering. Pages 160-175 in Colt, J. and S. Dendral eds., Fisheries Bioengineering: Proceedings of the Symposium. American Fisheries Society Special Publication Number 10. |
| 234 | 05148-05153 | 1991 | Sedell, J.R. and F.H. Everest. 1991. Historic changes in pool habitat for Columbia River Basin salmon under study for TES listing. Draft USDA Report. Pacific Northwest Research Station. Corvallis, OR. |
| 235 | 05154-05165 | 2001 | Selong, J.H., T.E. McMahon, A.V. Zale, and F.T. Barrows. 2001. Effect of temperature on growth and survival of bull trout, with application of an improved method for determining thermal tolerance in fishes. Transactions of the American Fisheries Society. 130: 1026-1037. |

**Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004**

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|----------------------------|-----------------------------|-----------------------------|---|
| <u>236</u> | 05166-05175 | 1997 | Sexauer, H.M., and P.W. James. 1997. Microhabitat Use by Juvenile Trout in Four Streams Located in the Eastern Cascades, Washington. Pages 361-370 in W.C. Mackay, M.K. Brown and M. Monita (eds.). Friends of the Bull Trout Conference Proceedings. Bull Trout Task Force (Alberta), do Trout Unlimited Calgary, Canada. |
| <u>237</u> | 05176-05186 | 1984 | Shepard, B.B., S.A. Leathe, T.M. Weaver, and M.D. Enk. 1984. Monitoring levels of fine sediment within tributaries of Flathead Lake and impacts of fine sediment on bull trout recruitment. Proceedings of the Wild Trout III Symposium, Yellowstone National Park, Wyoming. |
| <u>238</u> | 05187-05191 | 1982 | Simpson, J.C., and R.L. Wallace. 1982. Fishes of Idaho. University Press of Idaho. Moscow, ID. |
| <u>239</u> | 05192-05356 | Dec-96 | Spence, B.C., G.A. Lomnický, R.M. Hughes, R.P. Novitzki. 1996. An ecosystem approach to salmonid conservation. TR-4501-96-6057. ManTech Environmental Research Services Corp., Corvallis, OR. |
| <u>240</u> | 05357-05373 | 1996 | Stednick, J.D. 1996. Monitoring the effects of timber harvest on annual water yield. Journal of Hydrology 176:79-95. |
| <u>241</u> | 05374-05385 | 1997 | Swanberg, T.R. 1997. Movements of and Habitat use by fluvial bull trout in the Blackfoot River, Montana. Transactions of the American Fisheries Society 126:735-746. |
| <u>242</u> | 05386-05490 | Aug-92 | Thomas, G. 1992. Status of bull trout in Montana. Report prepared for Montana Department of Fish, Wildlife and Parks, Helena, Montana. |
| <u>243</u> | 05491-05711 | Jul-92 | Underwood, K.D., S.W. Martin, M.L. Schuck, and A.T. Scholz. 1992. Investigations of bull trout (<i>Salvelinus confluentus</i>), steelhead trout (<i>Oncorhynchus mykiss</i>), and spring shinook salmon (<i>O. tshawytscha</i>) interactions in southeast Washington Streams. 1991 Annual Report. U.S. Department of Energy, Bonneville Power Administration, Division of Fish and Wildlife. Project No. 90-053, Contract No. DE-BI79-91BP17758 |
| <u>244</u> | 05712-05774 | 4/5/1997 | USBOR (U.S. Bureau of Reclamation). 1997. Biological report on the Klamath project 1997 operations plan. USBR, Mid-Pacific Region, Klamath Basin Area Office. |
| <u>245</u> | 05775-05827 | April 1986 | USEPA (U.S. Environmental Protection Agency). 1986. Ambient water quality criteria for dissolved oxygen. EPA 440/5-86-003. Office of Water Regulations and Standards, Criteria and Standards Division, Washington DC. |
| <u>246</u> | 05828-05973 | 9/15/1998 | USEPA (U.S. Environmental Protection Agency). 1998. Biological assessment of the revised Oregon water quality standards for dissolved oxygen, temperature, and pH. U.S. Environmental Protection Agency, Seattle, WA. |
| <u>247</u> | 05974-05978 | 6/11/1985 | USFWS (U.S. Fish and Wildlife Service). 1985. Endangered and threatened wildlife and plants; determination of endangered status and critical habitat for the Modoc sucker, Final Rule, June 11, 1985 |
| <u>248</u> | 05979-06089 | Apr-93 | USFWS (U.S. Fish and Wildlife Service). 1993. Lost River (<i>Deltistes luxatus</i>) and shortnose (<i>Chasmistes brevirostris</i>) sucker Recovery Plan. Portland, Oregon. |
| <u>249</u> | 06090-06246 | Jan-95 | USFWS (U.S. Fish and Wildlife Service). 1995. Lahontan cutthroat trout, <i>Oncorhynchus clarki henshawi</i> , Recovery Plan. Portland, Oregon 147 pp. |
| <u>250</u> | 06247-06342 | 9/3/1998 | USFWS (U.S. Fish and Wildlife Service). 1998a. Recovery plan for the Oregon chub (<i>Oregonichthys crameri</i>). U.S. Fish and Wildlife Service, Portland, OR. 59 pages. |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---|---------------------------------|------------------|--|
| 251 | 06343-06441 | 4/27/1998 | USFWS (U.S. Fish and Wildlife Service). 1998b. Recovery plan for the native fishes of the Warner Basin and Alkali subbasin. U.S. Fish and Wildlife Service, Portland, OR. 86 pp. |
| 252 | 06442-06497 | 7/1/1999 | USFWS (U.S. Fish and Wildlife Service). 1999. Oregon water quality standards ESA consultation. U.S. Department of the Interior, US. Fish and Wildlife Service, Oregon State Office, Portland, OR. July 1, 1999. |
| 253 | 06498-06500 | 2002 | USFWS (U.S. Fish and Wildlife Service). 2002a. Bull trout (<i>Salvelinus confluentus</i>) endangered species fact sheet. |
| 254 | 06501-06647 | Oct-02 | USFWS (U.S. Fish and Wildlife Service). 2002b. Bull trout (<i>Salvelinus confluentus</i>) Draft Recovery Plan. Portland, Oregon |
| 255 | 06648-06650 | 2003 | USFWS (U.S. Fish and Wildlife Service). 2003a. Lahontan cutthroat trout (<i>Oncorhynchus clarki henshawi</i>) endangered species fact sheet. |
| 256 | 06651-06653 | 2003 | USFWS (U.S. Fish and Wildlife Service). 2003b. Oregon chub (<i>Oregonichthys crameri</i>) endangered species fact sheet. |
| 257 | 06654-07024 | Mar-98 | USFWS (U.S. Fish and Wildlife Service) and NMFS (National Marine Fisheries Service). 1998. Consultation handbook: procedures for conducting consultation and conference activities under Section 7 of the Endangered Species Act. |
| 258 | 07025-07039 | Mar-62 | Vaux, W.G. 1962. Interchange of stream and intragravel water in a salmon spawning riffle. Special Scientific Report — Fisheries No. 405. U.S. Dept. of the Interior, Fish and Wildlife Service. |
| 259 | 07040-07114 | Mar-97 | WDFW (Washington Department of Fish and Wildlife). 1997. Grandy creek trout hatchery biological assessment, bald eagle, marbled murrelet, northern spotted owl, spotted frog, bull trout |
| 260 | 07115-07558 | Jul-98 | WDFW (Washington Department of Fish and Wildlife). 1998. Washington State Salmonid Stock Inventory - Bull Trout/Dolly Vardin. |
| 261 | 07559-07574 | May-97 | Watson, G., and T.W. Hillman. 1997. Factors affecting the distribution and abundance of bull trout: and investigation at hierarchical scales. North American Journal of Fisheries Management 17:237-252. |
| 262 | 07575-07580 | 1973 | Wedemeyer, G. 1973. Some physiological aspects of sublethal heat stress in the juvenile steelhead trout (<i>Salmo gairdneri</i>) and coho salmon (<i>Oncorhynchus kisutch</i>). J. Fish. Res. Bd. Canada 30:831-834. |
| 263 | 07581-07581 | 3/1/2001 | Werdon, S., U.S. Fish and Wildlife Service. 2001. email message. BTRP citations |
| 264 | 07582-07591 | 1960 | Whitmore, C.M., C.E. Warren, and P. Doudoroff. 1960. Avoidance reactions of salmonid and centrarchid fishes to low oxygen concentrations. Transactions of the American Fisheries Society. 89(1):17-26. |
| 265 | 07592-07603 | 1992 | Ziller, J.S. 1992. Distribution and relative abundance of bull trout in the Sprague River subbasin, Oregon. Pages 18-29 in Howell, P.J. and D.V. Buchanan, editors. Proceedings of the Gearhart Mountain bull trout workshop. Oregon Chapter of the American Fisheries Society, Corvallis, OR. |
| Documents Included in NMFS' or EPA's Administrative Records That Are Also Part of FWS' Administrative Record | | | |
| | NMFS AR Doc. 22 EPA AR Doc. 156 | 1987 | Chapman, D. W. and McLeod, K.P. 1987. Development of Criteria for Fine Sediment in the Northern Rockies Ecoregion, Final Report EPA, contract No. 68-01-6986. EPA910/9-87-162 |

**Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004**

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|------------------|---------------------------------------|-----------------------------|---|
| | NMFS AR Doc. 27 | Jul-03 | Dewberry, T.C. 2003. Development and application of anchor habitat approaches to salmon conservation: A synthesis of data and observation from the Siuslaw watershed, coastal Oregon. Unpublished draft report. Portland, Oregon. 16 p. July. |
| | NMFS AR Doc. 30 EPA AR Doc. 96 | Mar-01 | Ecotrust, Oregon Trout, and The Wild Salmon Center. 2000. A Salmon Anchor Habitat Strategy for the Tillamook and Clatsop State Forests. Updated Version, March 2001. Portland, Oregon. 29 p. plus appendices. |
| | NMFS AR Doc. 39 EPA AR Doc. 163 | Jun-81 | Hollender, B. A. 1981. Embryo Survival, Substrate Composition, and Dissolved Oxygen in Redds of Wild Brook Trout. M. S. Thesis, Univ. of Wisconsin |
| | EPA AR Doc. 108 | 9/19/2002 | Myrick, Christopher A., et al. Sept. 19, 2002. Bull Trout Temperature Thresholds Peer Review Summary |
| | NMFS AR Doc. 69 EPA AR Doc. 101 | 2/26/2002 | Oregon Department of Fish and Wildlife, 1:24K Fish Habitat Distribution Development Project Procedures Manual |
| | EPA AR Doc. 64 | 2/4/2004 | U.S. EPA Biological Evaluation of the Revised Oregon Water Quality Standards for Temperature, Intergravel Dissolved Oxygen, and Antidegradation, Amended Final, prepared for USFWS and NMFS by EPA, Region 10 |
| | NMFS AR Doc. 31 EPA AR Doc. 104 | Apr-03 | U.S. EPA Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards, April 2003, EPA 910-B-03-002 |
| | NMFS AR Doc. 81 EPA AR Doc. 121 | May-01 | U.S. EPA Issue Paper 1: Salmonid Behavior and Water Temperature, Prepared as Part of EPA Region 10 Temperature Water Quality Criteria Guidance Development Project, EPA-910-D-01-001, May 2001 |
| | NMFS AR Doc. 28 EPA AR Doc. 122 | May-01 | U.S. EPA Issue Paper 2: Salmonids Distribution and Temperature, Prepared as Part of EPA Region 10 Temperature Water Quality Criteria Guidance Development Project, EPA-910-D-01-002, May 2001 |
| | NMFS AR Doc. 74 EPA AR Doc. 117 | Oct-01 | U.S. EPA Issue Paper 3: Spatial and Temporal Patterns of Stream Temperature, Prepared as Part of EPA Region 10 Temperature Water Quality Criteria Guidance Development Project, EPA-910-D-01-003, Oct. 2001 |
| | NMFS AR Doc. 47 EPA AR Doc. 123 | May-01 | U.S. EPA Issue Paper 4: Temperature Interaction, Prepared as Part of EPA Region 10 Temperature Water Quality Criteria Guidance Development Project, EPA-910-D-01-004, May 2001 |
| | NMFS AR Doc. 52 EPA AR Doc. 124 | May-01 | U.S. EPA Issue Paper 5: Summary of Technical Literature Examining the Physiological Effects of Temperature on Salmonids, Prepared as Part of EPA Region 10 Temperature Water Quality Criteria Guidance Development Project, EPA-910-D-01-005, May 2001 |
| | NMFS AR Doc. 98 EPA AR Doc. 119 | Aug-01 | U.S. EPA Technical Synthesis: Scientific Issues Relating to Temperature Criteria for Salmon, Trout, and Char Native to the Pacific Northwest: A Summary Report Submitted to the Policy Workgroup of the EPA Region 10 Water Temperature Criteria Guidance Project, EPA-910-D-01-007 |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|--|------------------|------------------|--|
| | EPA AR Doc. 95 | 1972 | National Academy of Sciences. 1972. Water Quality Criteria 1972 A Report of the Committee on Water Quality Criteria, Environmental Studies Board, National Academy of Sciences. U.S. Environmental Protection Agency. EPA.R3.73. |
| | EPA AR Doc. 159 | Apr-86 | U.S. EPA. 1986. Ambient Water Quality Criteria for Dissolved Oxygen (Freshwater), Office of Water Regulations and Standards, Criteria and Standards Division, EPA 440/5-86-003 |
| Supplemental Administrative Record dated March 18, 2008 | | | |
| 266 | 07604-07605 | 12/2/2003 | FWS comments on the Analysis of Effects on Draft Biological Evaluation (BE) |
| 267 | 07606-07620 | Nov-03 | Designated Use Maps |
| 268 | 07621-07622 | 10/8/2003 | Draft Where and When Comments (Fish Use Maps and Tables) |
| 269 | 07623-07625 | 10/6/2003 | Comments on Final Draft Biological Assessment (BA) by Elizabeth Materna, FWS |
| 270 | 07626-07628 | 10/1/2003 | Draft FWS Comments on Oregon Proposed Rule |
| 271 | 07629-07630 | 9/17/2003 | Elizabeth Materna, FWS Handwritten Notes from conversation with Chris Allen, FWS |
| 272 | 07631-07632 | 9/2/2003 | Comments by Elizabeth Materna, FWS, on draft BA for EPA's Promulgation WQ Standards for Oregon |
| 273 | 07633-07634 | 8/28/2003 | Elizabeth Materna, FWS, Handwritten Notes from Where and When Conference Call |
| 274 | 07635-07635 | 8/20/2003 | Elizabeth Materna, FWS, comments on Analysis of Effects Dry Run |
| 275 | 07636-07638 | 8/6/2003 | Elizabeth Materna, FWS, Handwritten notes on Where and When Conference Call |
| 276 | 07639-07640 | 8/6/2003 | Final Draft of Decision Rules to Designate Pacific Salmon and Bull Trout Beneficial Uses in Oregon |
| 277 | 07641-07643 | 8/5/2003 | Final Draft of Decision Rules to Designate Pacific Salmon and Bull Trout Beneficial Uses in Oregon |
| 278 | 07644-07645 | 7/30/2003 | Elizabeth Materna, FWS, Handwritten notes on Where and When Conference Call |
| 279 | 07646-07726 | 7/21/2003 | Draft Department of Environmental Quality Water Pollution Division 41 Water Quality Standards Beneficial Uses, Policies and Criteria for Oregon |
| 280 | 07727-07727 | 7/15/2003 | Elizabeth Materna, FWS, comments on Draft Biological Assessment (BA) |
| 281 | 07728-07729 | 7/11/2003 | Decision Rule Assumptions to Date |
| 282 | 07730-07745 | 7/7/2003 | Draft Bull Trout Critical Habitat Maps with handwritten notes |
| 283 | 07746-07774 | 7/7/2003 | Draft Oregon Temperature Criteria |
| 284 | 07775-07775 | 6/10/2003 | Elizabeth Materna, FWS, Handwritten Notes |
| 285 | 07776-07866 | Jan-03 | Draft US Fish and Wildlife Service (USFWS) Biological Opinion (BO) for EPA Approval of Oregon Water Quality Standards |
| 286 | 07867-07871 | No Date | Elizabeth Materna, FWS, Handwritten Notes on Basin Timing |
| 287 | 07872-07872 | No Date | Elizabeth Materna, FWS, Handwritten Notes |
| 288 | 07873-07884 | No Date | Hood River Map Revisions |
| 289 | 07885-07885 | No Date | Elizabeth Materna, FWS, Handwritten Notes from discussion with Janine Castro, FWS |
| 290 | 07886-07890 | No Date | John Day Bull Trout Core Area Maps with handwritten notes from Elizabeth Materna, FWS |
| 291 | 07891-07892 | No Date | Elizabeth Materna, FWS, Handwritten notes on Effects Analysis |
| 292 | 07893-07899 | No Date | Table of Bull Trout Effects at various temp. |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|--|------------------|------------------|--|
| 293 | 07900-07943 | No Date | Draft USFWS Biological Opinion for EPA Approval of Oregon Water Quality Standards |
| Biological Opinion Email Messages | | | |
| 294 | 07944-07944 | 2/11/2004 | EMail from David Leal, FWS, to Elizabeth Materna, FWS, Subject: Paul Bridges, FWS, status of the species for bull trout/Oregon chub, with 1 attachment |
| 295 | 07945-08008 | 2/11/2004 | Attachment 1: Status of the Species, Oregon Chub |
| 296 | 08009-08009 | 2/9/2004 | EMail from Jennifer Lord, FWS, to Elizabeth Materna, FWS, Subject: Review of Oregon chub information |
| 297 | 08010-08010 | 1/29/2004 | Email from Jeff Lockwood, NOAA, to Mark Charles, ODEQ, et al., Subject: DEQ Temperature Letter No. 2 |
| 298 | 08011-08012 | 1/22/2004 | Email from Cathy Tortorici, NOAA, to John Palmer, EPA, et al., Subject: Revised conservation Measure #1 (slight date change) |
| 299 | 08013-08013 | 12/19/2003 | EMail from Emily Smith, DEQ, to Chris Mebane, NOAA, et al., Subject: DEQ Response to Public Comment Summary, with 1 attachment |
| 300 | 08014-08061 | 12/19/2003 | Attachment 1: Attachment B Division 41 Revisions Response to Public Comment (11-10-03) |
| 301 | 08062-08062 | 12/18/2003 | EMail from Debra Sturdevant, DEQ, to Chris Mebane, NOAA, et al., Subject: Environmental Quality Commission adopts Temperature Rule |
| 302 | 08063-08064 | 12/17/2003 | EMail from Dru Keenan, EPA, to Elizabeth Materna, FWS, Subject: Draft Conservation Measures Please Review, with 2 attachments. |
| 303 | 08065-08066 | 12/17/2003 | Attachment 1: Re-draft of Conservation Measures based on December 11th conference call |
| 304 | 08067-08068 | 12/17/2003 | Attachment 2: 12/15/03 Draft of Conservation Measures based on December 11th conference call |
| 305 | 08069-08071 | 12/17/2003 | EMail from Dru Keenan, EPA, to Elizabeth Materna, FWS, Subject: Oregon Clarification Letter, with 1 attachment |
| 306 | 08072-08073 | 12/17/2003 | Attachment 1: 12/15/03 Draft of Conservation Measures based on December 11th conference call |
| 307 | 08074-08076 | 12/16/2003 | Email from Elizabeth Materna, FWS, to John Palmer, EPA, et al., Subject: Oregon Clarification Letter with 1 attachment |
| 308 | 08077-08078 | 12/16/2003 | Attachment 1: Re-draft of Conservation Measures Dec 15, 2003 |
| 309 | 08079-08079 | 12/11/2003 | EMail from Chris Allen, FWS, to Elizabeth Materna, FWS, Subject: bull trout status of the species, with 1 attachment |
| 310 | 08080-08119 | 12/11/2003 | Attachment 1: Status of Species Critical Habitat, Bull Trout |
| 311 | 08120-08120 | 12/11/2003 | EMail from Chris Allen, FWS, to Elizabeth Materna, FWS, Subject: Chapter 1 on Bull Trout Development, with 1 attachment |
| 312 | 08121-08267 | 12/11/2003 | Attachment 1: Bull Trout Draft Recovery Plan, Chapter 1 Introductory, October 2002 |
| 313 | 08268-08271 | 12/4/2003 | Email from Dru Keenan, EPA, to Elizabeth Materna, FWS, Subject: decision rules |
| 314 | 08272-08272 | 11/24/2003 | EMail from Debra Sturdevant, DEQ, to Larry Knudsen, OSU, et al, Subject: Possible bull trout criteria revision, with 1 attachment |
| 315 | 08273-08276 | 11/24/2003 | Attachment 1: Bull trout changes |
| 316 | 08277-08277 | 11/24/2003 | EMail from Debra Sturdevant, DEQ, to Larry Knudsen, OSU, et al., Subject: Possible bull trout criteria revision, with 1 attachment |
| 317 | 08278-08281 | 11/24/2003 | Attachment 1: Bull trout changes |
| 318 | 08282-08282 | 11/20/2003 | Email from Jeff Lockwood, NOAA, to Deb Sturdevant, ODEQ, et al., Subject: issue or clarification- protecting cold water |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---------------------|------------------|------------------|--|
| 319 | 08283-08288 | 11/4/2003 | Email from Anne Walker, FWS, to Elizabeth Materna, FWS, Subject: Holy Heat Sump, temperature below Clear Branch Dam |
| 320 | 08289-08290 | 11/4/2003 | EMail from Elizabeth Materna, FWS, to Mark Charles, DEQ, et al., Subject: Two more comments on latest Draft of Division 41 11/3/03 |
| 321 | 08291-08291 | 11/3/2003 | EMail from Mark Charles, DEQ to Mark Charles, DEQ, et al., Subject: Latest Draft of Division 41 11/3/03, with 1 attachment |
| 322 | 08292-08396 | 11/3/2003 | Attachment 1: Department of Environmental Quality Water Pollution Division 41 Water Quality Standards, Beneficial Uses, Policies and Criteria for Oregon, 11/03/03 Draft |
| 323 | 08397-08397 | 11/3/2003 | EMail from Elizabeth Materna, FWS, to Mark Charles, DEQ, et al., Subject: Latest Draft of Division 41 11/3/03 |
| 324 | 08398-08398 | 11/3/2003 | EMail from Elizabeth Materna, FWS, to Mark Charles, DEQ, et al., Subject: One other thing in latest draft |
| 325 | 08399-08399 | 11/3/2003 | EMail from Elizabeth Materna, FWS, to Mark Charles, DEQ, et al., Subject: Latest Draft of Division 41 11/3/03 |
| 326 | 08400-08400 | 11/3/2003 | Email from Deb Sturdevant, ODEQ, to Jeff Lockwood, NOAA, et al., Subject: Notes from 10/28 Meeting - Key Unresolved Issues |
| 327 | 08401-08402 | 11/3/2003 | Email from Jeff Lockwood, NOAA, to Deb Sturdevant, ODEQ, et al., Subject: Ecotrust Data |
| 328 | 08403-08403 | 10/31/2003 | EMail from Mark Charles, DEQ, to Marylou Soscia, EPA, et al., Subject: Trick or Treat Draft of Division 41, with 1 attachment |
| 329 | 08404-08503 | 10/31/2003 | Attachment 1: Department of Environmental Quality Water Pollution Division 41 Water Quality Standards, Beneficial Uses, Policies and Criteria for Oregon, 10/31/03 Draft |
| 330 | 08504-08504 | 10/31/2003 | EMail from Mark Charles, DEQ to Paula Vanhaagen, EPA, et al., Subject: Revised section 11, with 1 attachment |
| 331 | 08505-08506 | 10/31/2003 | Attachment 1: Draft revised sections 11&12 |
| 332 | 08507-08507 | 10/31/2003 | Email from Dru Keenan, EPA, to John Palmer, EPA, et al. Subject: Notes from 10/28 Meeting - Key Unresolved Issues, with 1 attachment |
| 333 | 08508-08509 | 10/31/2003 | Draft Meeting Notes from Where & When Meeting |
| 334 | 08510-08510 | 10/30/2003 | Email from Jeff Lockwood, NOAA, to Mark Charles, ODEQ, et al., Subject: Oregon rule language |
| 335 | 08511-08512 | 10/27/2003 | Email from Jeff Lockwood, NOAA, to Deb Sturdevant, ODEQ, et al., Subject: FINAL notes from 10/14 where & when with 1 attachment |
| 336 | 08513-08514 | 10/27/2003 | Attachment 1: Meeting Notes for October 14, 2003 Beneficial Use Group |
| 337 | 08515-08515 | 10/27/2003 | EMail from Mark Charles, DEQ, to Mark Charles, DEQ, et al, Subject: 10/26 Revision of Proposed Division 41 (Temp) Rule, with 1 attachment |
| 338 | 08516-08605 | 10/27/2003 | Attachment 1: Department of Environmental Quality Water Pollution Division 41 Water Quality Standards, Beneficial Uses, Policies and Criteria for Oregon, 10/26/03 Draft |
| 339 | 08606-08607 | 10/24/2003 | Email from Chris Mebane, NOAA, to Jeff Lockwood, NOAA, et al., Subject: Fall chinook spawning/incubation temperature designation, with 2 attachments |
| 340 | 08608-08615 | 10/24/2003 | Attachment 1: Temperature during Incubation as One Factor Affecting the Distribution of Snake River Fall Chinook Salmon Spawning Areas |
| 341 | 08616-08616 | 10/24/2003 | Attachment 2: Salmon & Steelhead Spawning Through Fry Emergence Use Designations Umpqua Basin Oregon Map, August 8, 2003 |
| 342 | 08617-08617 | 10/24/2003 | Email from Chris Mebane, NOAA, to Dru Keenan, EPA, et al., Subject: Temperature analysis, round 2, with 1 attachment |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---------------------|------------------|------------------|--|
| 343 | 08618-08624 | 10/24/2003 | Attachment 1: Table with GIS locations |
| 344 | 08625-08625 | 10/17/2003 | EMail from Cedric Cooney, OSU, to Jeff Lockwood, NOAA, et al., Subject: Lines-of-evidence query results - updated as of 10/15/2003 (w/attachment), with 1 attachment |
| 345 | 08626-08657 | 10/17/2003 | Attachment 1: Temperature Standard Table |
| 346 | 08658-08658 | 10/13/2003 | EMail from Debra Sturdevant, DEQ, to Robert Anderson, NOAA et al, Subject: Temperature TAC meeting |
| 347 | 08659-08659 | 10/10/2003 | Email from Chris Mebane, NOAA, to Emily Smith, ODEQ, et al., Subject: NOAA comments on distribution of 16C's in Columbia R subbasins |
| 348 | 08660-08660 | 10/8/2003 | EMail from Tracy Harrison, DEQ, to Jeff Lockwood, NOAA et al., Subject: Comments from ODEQ and ODFW on Where & When mapping issues, with 1 attachment |
| 349 | 08661-08663 | 10/8/2003 | Attachment 1: Internal comments received during comment period; Where and When; 10/08/03 |
| 350 | 08664-08664 | 9/23/2003 | EMail from Emily Smith, DEQ, to Elizabeth Materna, FWS, Subject: John Day corrections |
| 351 | 08665-08665 | 9/22/2003 | EMail from Emily Smith, DEQ, to Elizabeth Materna, FWS, Subject: Bull trout John Day maps |
| 352 | 08666-08666 | 9/18/2003 | EMail from Emily Smith, DEQ, to Elizabeth Materna, FWS, Subject: Bull trout John Day maps |
| 353 | 08667-08667 | 9/10/2003 | EMail from Emily Smith, DEQ to Elizabeth Materna, FWS, Subject: Klamath map, with 2 attachments |
| 354 | 08668-08668 | 9/10/2003 | Attachment 1: Figure 201A/260A; Critical Period Fish Use Designations Powder and Malheur Basins, Oregon; Draft 08/08/03 Map |
| 355 | 08669-08669 | 9/10/2003 | Attachment 2: Figure 180A; Critical Period Fish Use Designations Klamath Basin, Oregon, Draft 08/08/03 Map |
| 356 | 08670-08670 | 8/13/2003 | Email from Chris Mebane, NOAA, to Elizabeth Materna, FWS, et al., Subject: Revised Grande Ronde maps - attached with 2 attachments |
| 357 | 08671-08671 | 8/13/2003 | Attachment 1: Figure 151B: Salmon, Steelhead and Bull Trout Spawning through Fry Emergence Beneficial Use Designation, Grande Ronde Basin |
| 358 | 08672-08672 | 8/13/2003 | Attachment 2: Figure 151A: Critical Period, Fish Use Designations Grande Ronde Basin, Oregon Draft |
| 359 | 08673-08675 | 8/12/2003 | EMail from Debra Sturdevant, DEQ to Elizabeth Materna, FWS, Subject: Powder and Malheur summer max map |
| 360 | 08676-08676 | 8/11/2003 | EMail from Elizabeth Materna, FWS, to Tracy Harrison, DEQ, et al., Subject: Powder and Malheur summer max map, with 1 attachment |
| 361 | 08677-08677 | 8/11/2003 | Attachment 1: Critical Period, Fish Use Designations Powder and Malheur Basins, Oregon, Draft 08/08/03 Map |
| 362 | 08678-08679 | 8/11/2003 | EMail from Tracy Harrison, DEQ, to Elizabeth Materna, FWS Subject: Powder and Malheur summer max map |
| 363 | 08680-08680 | 8/8/2003 | EMail from Tracy Harrison, DEQ, to Chris Mebane, NOAA, et al., Subject: Klamath summer max map, with 1 attachment |
| 364 | 08681-08681 | 8/8/2003 | Attachment 1: Critical Period, Fish Use Designations, Klamath Basin, Oregon, Draft, 08/08/03 Map |
| 365 | 08682-08682 | 8/7/2003 | Salmon Steelhead & Bull Trout Spawning Through Fry Emergence Beneficial Use Designations John Day Basin |
| 366 | 08683-08683 | 8/7/2003 | Salmon Steelhead & Bull Trout Spawning Through Fry Emergence Beneficial Use Designations Umatilla Basin |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---------------------|------------------|------------------|--|
| 367 | 08684-08684 | 8/7/2003 | Salmon Steelhead & Bull Trout Spawning Through Fry Emergence Beneficial Use Designations Deschutes Basin |
| 368 | 08685-08685 | 8/7/2003 | EMail from Tracy Harrison, DEQ to Chris Mebane, NOAA, et al., Subject: Willamette, Mid Coast, and North Coast spawning maps, with 3 attachments |
| 369 | 08686-08686 | 8/7/2003 | Attachment 1: Salmon, Steelhead & Bull Trout Spawning Through Fry Emergence Use Designations Willamette Basin Oregon, Draft, 08/07/03 Map |
| 370 | 08687-08687 | 8/7/2003 | Attachment 2: Salmon & Steelhead Spawning Through Fry Emergence Use Designations Mid Coast Basin, Oregon, Draft 08/07/03 Map |
| 371 | 08688-08688 | 8/7/2003 | Attachment 3: Salmonid Spawning Through Fry Emergence Use Designations North Coast Basin, Oregon, Draft 08/07/03 Map |
| 372 | 08689-08689 | 8/6/2003 | EMail from William Bogue, EPA, to William Bogue, EPA, et al., Subject: Deschutes Summer Max & Umpqua Spawning Maps, with 2 attachments |
| 373 | 08690-08690 | 8/6/2003 | Attachment 1: Preliminary Deschutes Basin Summer Maximum Stream Temperature Criteria for Protection of Salmon and Trout Core Rearing & Migration and Bull Trout Spawning Rearing & Migration Map |
| 374 | 08691-08691 | 8/6/2003 | Attachment 2: Salmon & Steelhead Spawning Through Fry Emergence Use Designations Umpqua Basin Oregon Map |
| 375 | 08692-08692 | 8/6/2003 | EMail from Tracy Harrison, DEQ, to Chris Mebane, NOAA, et al., Subject: Hood Spawning Map, with 1 attachment |
| 376 | 08693-08693 | 8/6/2003 | Attachment 1: Salmonid Spawning & Fry Emergence Use Designations Hood Basin, Oregon, Draft 08/06/03 Map |
| 377 | 08694-08694 | 8/5/2003 | EMail from Debra Sturdevant, DEQ, to John Palmer, EPA, et al., Subject: Final Draft of Where/When Decision Rules, with 1 attachment |
| 378 | 08695-08696 | 8/5/2003 | Attachment 1: Final Draft of Decision Rules to Designate Pacific Salmon and Bull Trout Beneficial Uses in Oregon; 08/05/2003 |
| 379 | 08697-08698 | 8/4/2003 | EMail from Debra Sturdevant, DEQ, to Elizabeth Materna, FWS, Subject: Prime, sub-prime or cooler habitat |
| 380 | 08699-08700 | 7/31/2003 | Email from Dru Keenan, EPA, to Elizabeth Materna, FWS, et al., Subject: NEW ALERT Bull Trout additional criteria provision |
| 381 | 08701-08703 | 7/31/2003 | EMail from Debra Sturdevant, DEQ, to Chris Mebane, NOAA, Subject: Prime, sub-prime, or cooler habitat, possible terms to use for the various temperature categories |
| 382 | 08704-08704 | 7/30/2003 | EMail from Tracy Harrison, DEQ, to Tracy Harrison, DEQ, et al., Subject: Hood Basin Newest Spawning with and without Bull Trout, with 2 attachments |
| 383 | 08705-08705 | 7/30/2003 | Attachment 1: Salmonid Spawning and Fry Emergence Use Designations, Hood Basin Oregon; Draft, 07/30/2003 |
| 384 | 08706-08706 | 7/30/2003 | Attachment 2: Salmonid Spawning and Fry Emergence Use Designations, Hood Basin Oregon; Draft, 07/30/2003 |
| 385 | 08707-08707 | 7/29/2003 | Email from Chris Mebane, NOAA, to Tracy Harrison, ODEQ, et al., Subject: Please respond - Revised decision rules with 1 attachment |
| 386 | 08708-08709 | 7/29/2003 | Attachment 1: Decision Rules for mapping Salmonid Uses, 7/28/03 revision |
| 387 | 08710-08711 | 7/28/2003 | EMail from Chris Mebane, NOAA, to Debra Sturdevant, DEQ, Subject: Bull trout proposal |
| 388 | 08712-08712 | 7/28/2003 | EMail from Jennifer Weaver, DEQ, to Bill Blosser, et al., Subject: Nearly Last Call on Division 41 Revisions, with 1 attachment |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---------------------|------------------|------------------|---|
| 389 | 08713-08800 | 7/28/2003 | Attachment 1: Draft #5 (July 28, 2003) DEQ Water Pollution Division 41 State-Wide Water Quality Management Plan; Beneficial Uses, Policies, Standards and Treatment Criteria for Oregon |
| 390 | 08801-08801 | 7/25/2003 | EMail from Emily Smith, DEQ, to William Bogue, EPA et al., Subject: DEQ bull trout information, all 5 attachments are GIS files that are in one PDF file below |
| 391 | 08802-08816 | 7/25/2003 | Attachment: Draft GIS Maps |
| 392 | 08817-08819 | 7/25/2003 | Email from Deb Sturdevant, ODEQ, to John Palmer, EPA, et al., Subject: New Spawning Proposal!!!! |
| 393 | 08820-08820 | 7/24/2003 | EMail from Jennifer Weaver, DEQ, to Bill Blosser, et al., Subject: Division 41 Rewrite with 'HTML Curse' Reversed, with 1 attachment |
| 394 | 08821-08901 | 7/24/2003 | Attachment 1: Draft #4 (July 21, 2003) DEQ Water Pollution Division 41 State-Wide Water Quality Management Plan; Beneficial Uses, Policies, Standards and Treatment Criteria for Oregon |
| 395 | 08902-08903 | 7/23/2003 | Email from John Palmer, EPA, to Chris Mebane, NOAA, et al., Subject: New Spawning Proposal |
| 396 | 08904-08906 | 7/22/2003 | Email from Debra Sturdevant, ODEQ, to Bill Bogue, EPA, et al., Subject: Bull Trout Spawning Mapping & Assigning Values to Diversions |
| 397 | 08907-08908 | 7/22/2003 | Email from Debra Sturdevant, ODEQ, to Bill Bogue, EPA, et al., Subject: bull trout files - FEEDBACK PLEASE! |
| 398 | 08909-08910 | 7/22/2003 | Email from Bill Bogue, EPA, to Emily Smith, ODEQ, et al., Subject: bull trout files - FEEDBACK PLEASE!, 1 attachment |
| 399 | 08911-08911 | 7/22/2003 | Attachment 1: Preliminary John Day Basin Summer Maximum Stream Temperature Criteria for Protection of Salmon & Trout Core Rearing & Migration and Bull Trout Spawning |
| 400 | 08912-08912 | 7/22/2003 | Email from Bill Bogue, EPA, to Debra Sturdevant, ODEQ, et al., Subject: Deschutes Bull Trout Summer Max, 2 attachments |
| 401 | 08913-08913 | 7/22/2003 | Attachment 1: Preliminary Deschutes Basin Summer Max Stream Temp Criteria for Protection of Salmon & Trout Core Rearing & Migration, and Bull Trout Spawning, Rearing & Migration |
| 402 | 08914-08914 | 7/22/2003 | Attachment 2: Preliminary Deschutes Basin Summer Max Stream Temp Criteria for Protection of Salmon & Trout Core Rearing & Migration, and Bull Trout Spawning, Rearing & Migration |
| 403 | 08915-08915 | 7/21/2003 | Email from Bill Bogue, EPA, to Bill Bogue, et al., Subject: John Day & Rogue Maps for Today's conference call, 4 attachments |
| 404 | 08916-08916 | 7/21/2003 | Attachment 1: Preliminary Rogue Basin Maximum Stream Temperature Criteria for Protection of Salmon and Trout Spawning |
| 405 | 08917-08917 | 7/21/2003 | Attachment 2: Preliminary Rogue Basin Summer Max Stream Temperature Criteria for Protection of Salmon & Trout Core Rearing & Migration |
| 406 | 08918-08918 | 7/21/2003 | Attachment 3: John Day Basin Preliminary Application of 13C Max Stream Temperature Criteria to Protect Salmon/Trout Spawning |
| 407 | 08919-08919 | 7/21/2003 | Attachment 4: Preliminary John Day Basin Summer Max Stream Temperature Criteria for Protection of Salmon & Trout Core Rearing & Migration and Bull Trout Spawning |
| 408 | 08920-08920 | 7/16/2003 | EMail from Anne Walker, FWS, to Elizabeth Materna, FWS, Subject: Hood BT map, with 1 attachment |
| 409 | 08921-08921 | 7/16/2003 | Attachment 1: Changes needed to Draft Hood Recovery Unit and Critical Habitat Map for finalization |

**Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004**

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---|-----------------------------|-----------------------------|---|
| 410 | 08922-08922 | 7/14/2003 | EMail from Mark Charles, DEQ, to Jennifer Weaver, DEQ, et al., Subject: Current New Division 41 Rewrite with Track Changes, with 1 attachment |
| 411 | 08923-08959 | 7/14/2003 | Attachment 1: Draft DEQ Water Pollution Division 41 State-Wide Water Quality Management Plan; Beneficial Uses, Policies, Standards and Treatment Criteria for Oregon; July 14, 2003 (3rd draft) |
| 412 | 08960-08960 | 7/14/2003 | EMail from Mark Charles, DEQ, to Jennifer Weaver, DEQ, et al., Subject: Current New Division 41 Rewrite with Track Changes, with 1 attachment |
| 413 | 08961-08997 | 7/14/2003 | Attachment 1: Draft DEQ Water Pollution Division 41 State-Wide Water Quality Management Plan; Beneficial Uses, Policies, Standards and Treatment Criteria for Oregon; July 14, 2003 (3rd draft) |
| 414 | 08998-08999 | 7/11/2003 | Email from Dru Keenan, EPA, to Cedric Cooney, ODFW, et al., Subject: Decision Rules Justifications/Assumptions- to date; 1 attachment |
| 415 | 09000-09001 | 7/11/2003 | Attachment 1: Decision Rule Assumptions to date |
| 416 | 09002-09003 | 6/25/2003 | Email from Emily Smith, DEQ to William Bogue, EPA and Elizabeth Materna, FWS Subject: ArcView files for the Bull Trout Habitat Use Designations |
| 417 | 09004-09072 | 5/21/2003 | Email from John Palmer, EPA, to Jeffrey Lockwood, NOAA, et al., Subject: Agenda for Where/When Meeting 5/27-28; 5 attachments Attachment 1: draft Agenda Attachment 2: Trail Map Attachment 3: Oregon Options Recommendations Attachment 4: Life stage inventory Attachment 5: OFWO complete manual |
| Temperature Project Email Messages | | | |
| 418 | 09073-09073 | 4/28/2003 | EMail from John Palmer, EPA, to Dave Mabe, IDEQ, et al., Subject: Final Temperature Guidance, with 4 attachments |
| 419 | 09074-09129 | 4/28/2003 | Attachment 1: EPA Final Guidance for Pacific NW State and Tribal Temperature Water Quality Standards; April 2003 |
| 420 | 09130-09132 | 4/28/2003 | Attachment 2: NOAA support letter to EPA; April 23, 2003 |
| 421 | 09133-09135 | 4/28/2003 | Attachment 3: FWS support letter to EPA; April 21, 2003 |
| 422 | 09136-09137 | 4/28/2003 | Attachment 4: EPA Issues Final Water Temperature Guidance; April 2003 |
| 423 | 09138-09138 | 2/26/2003 | EMail from John Palmer, EPA, to Dave Mabe, IDEQ, et al., Subject: 2-pager for Temperature Call today, with 1 attachment |
| 424 | 09139-09141 | 2/26/2003 | Attachment 1: Determining the Spatial Extent of the Recommended Salmonid Uses |
| 425 | 09142-09142 | 2/3/2003 | EMail from Jim Muck, FWS, to John Palmer, EPA, Subject: Reply to comments, with 1 attachment |
| 426 | 09143-09144 | 2/3/2003 | Attachment 1: EPA has not demonstrated that human influences on temperature is a problem for fish populations as a whole |
| 427 | 09145-09146 | 1/23/2003 | EMail from John Palmer, EPA, to Dave Mabe, IDEQ, et al., Subject: Temperature Meeting Agenda & other materials, with 5 attachments |
| 428 | 09147-09147 | 1/23/2003 | Attachment 1: EPA Temperature Guidance Meeting Draft Agenda |
| 429 | 09148-09154 | 1/23/2003 | Attachment 2: Section VI & mixing zone provisions to protect salmonids |
| 430 | 09155-09159 | 1/23/2003 | Attachment 3: Possible changes to temperature guidance, draft, 01/16/02 |
| 431 | 09160-09169 | 1/23/2003 | Attachment 4: Summary of Scientific Peer Review Discussion concerning US EPA Region 10 Guidance for stream temperature water quality standards, December 3, 2002 |
| 432 | 09170-09176 | 1/23/2003 | Attachment 5: Major comments (categorized) on 2nd draft of temperature guidance; 1/7/03 |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---------------------|------------------|------------------|--|
| 433 | 09177-09177 | 1/16/2003 | EMail from John Palmer, EPA, to Dave Mabe, IDEQ. et al., Subject: Temp Materials (Changes, Peer Review, Comment Sum), with 3 attachment(s). |
| 434 | 09178-09182 | 1/16/2003 | Attachment 1: Possible Changes to Temperature Guidance draft, 1/16/02 |
| 435 | 09183-09192 | 1/16/2003 | Attachment 2: Summary of Scientific Peer Review Discussion concerning US EPA Region 10 Guidance for stream temperature water quality standards, December 3, 2002 |
| 436 | 09193-09199 | 1/16/2003 | Attachment 3: Major Comments (categorized) on 2nd Draft of Temperature Guidance; 1/7/03 |
| 437 | 09200-09200 | 11/26/2002 | EMail from John Palmer, EPA to Dru Keenan, EPA, et al., Subject: Peer Review Questions, with 2 attachments |
| 438 | 09201-09203 | 11/26/2002 | Attachment 1: Questions for the Scientific Peer Review Panel EPA's 2nd Draft Temperature Guidance; 11/26/2002 |
| 439 | 09204-09221 | 11/26/2002 | Attachment 2: EPA Region 10 Draft Temperature Guidance Overview of 2nd public review draft |
| 440 | 09222-09222 | 9/30/2002 | EMail from John Palmer, EPA, to Dave Mabe, IDEQ, et al., Subject: Changes to Temperature Guidance, with 1 attachment |
| 441 | 09223-09232 | 9/30/2002 | Attachment 1: EPA, Discussion of Use and Criteria Presented in Table 3 |
| 442 | 09233-09233 | 9/30/2002 | EMail from Shelley Spalding, FWS, to John Palmer, EPA, Subject: Bull Trout Peer Review, with 1 attachment |
| 443 | 09234-09247 | 9/30/2002 | Attachment 1: Bull Trout Temperature Threshold peer review summary; September 19, 2002 |
| 444 | 09248-09249 | 9/16/2002 | EMail from Shelley Spalding, FWS, to John Palmer, EPA, Subject: Comments on revised temperature guidance |
| 445 | 09250-09250 | 8/29/2002 | EMail from John Palmer, EPA, to D. Mabe, DEQ, et al., Subject: Revised Temperature Guidance, with 1 attachment |
| 446 | 09251-09280 | 8/29/2002 | Attachment 1: EPA 2nd Draft for State and Tribal Temperature Water Quality Standards; August 29, 2002 |
| 447 | 09281-09282 | 8/8/2002 | EMail from Debra Sturdevant, DEQ, to John Palmer, EPA, Subject: Mulling over the Temperature Criteria Metric, with 3 attachments |
| 448 | 09283-09537 | 8/8/2002 | Attachment 1: Average Temperatures Table for two Grande Ronde Basin monitoring locations |
| 449 | 09538-09541 | 8/8/2002 | Attachment 2: Summary table of Temperature Data for 8 monitoring locations |
| 450 | 09542-09543 | 8/8/2002 | Attachment 3: Memo to John Palmer from Debra Sturdevant regarding temperature metric comments |
| 451 | 09544-09544 | 8/7/2002 | EMail from Dale McCullough, to Don Essig, IDEQ, et al., Subject: Re: Mulling over the Temperature Criteria Metric, with 1 attachment |
| 452 | 09545-09547 | 8/7/2002 | Attachment 1: Memo to John Palmer, EPA from Dale McCullough, CRITFC regarding Mulling over the Temperature Criteria Metric |
| 453 | 09548-09548 | 8/6/2002 | EMail from John Palmer, EPA to Dave Mabe, IDEQ, et al., Subject: Major Decisions for Temperature Guidance/Next meeting - Aug 28th, with 1 attachment |
| 454 | 09549-09549 | 8/6/2002 | Attachment 1: Major Decisions regarding the draft temperature guidance, 08/05/02 |
| 455 | 09550-09551 | 8/6/2002 | EMail from Jason Dunham, FS, to John Palmer, EPA, Subject: Mulling over the Metric |
| 456 | 09552-09554 | 8/6/2002 | EMail from Don Essig, IDEQ, to Dave Mabe, IDEQ, et al., Subject: Mulling over the Metric, with 1 attachment |

**Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004**

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---------------------|-----------------------------|-----------------------------|---|
| 457 | 09555-09575 | 8/6/2002 | Attachment 1: Issues related to temperature measurement and monitoring, May 25, 2000 |
| 458 | 09576-09576 | 7/29/2002 | EMail from Shelley Spalding, FWS, to John Palmer, EPA. Subject: Paragraph on Bull trout listing & temperature with 1 attachment |
| 459 | 09577-09577 | 7/29/2002 | Attachment 1: EPA Bull Trout paragraph |
| 460 | 09578-09578 | 7/11/2002 | EMail from Shelley Spalding, FWS, to Bull Trout Temperature Peer Review Panel, et al., Subject: Bull trout peer review documents, with 1 attachment |
| 461 | 09579-09581 | 7/11/2002 | Attachment 1: EPA's Bull Trout Recommendation, July 9, 2002 |
| 462 | 09582-09583 | 7/11/2002 | EMail from Shelley Spalding, FWS, to Dave Mabe, IDEQ, et al., Subject: Literature for peer reviewers |
| 463 | 09584-09584 | 7/3/2002 | EMail from Shelley Spalding, FWS, to John Palmer, EPA, Subject: Bull trout peer review documents, with 5 attachments |
| 464 | 09585-09609 | 7/3/2002 | Attachment 1: Multiple Lines of Evidence for Determining Upper Optimal Temperature Threshold for Bull Trout; Dale McCullough, CRITFC, and Shelly Spalding, USFWS, June 27, 2002 |
| 465 | 09610-09633 | 7/3/2002 | Attachment 2: Dissenting Opinion on Biological Threshold Numbers proposed by Regional Temperature Criteria Development Technical Workgroup |
| 466 | 09634-09701 | 7/3/2002 | Attachment 3: Evaluating Standards for Protecting Aquatic Life in Washington's Surface Water Quality Standards Temperature Criteria, June 2002 |
| 467 | 09702-09704 | 7/3/2002 | Attachment 4: EPA Bull Trout peer review questions, July 3, 2002 |
| 468 | 09705-09707 | 7/3/2002 | Attachment 5: EPA Bull Trout Recommendation |
| 469 | 09708-09708 | 6/20/2002 | EMail from Shelley Spalding, FWS, to John Palmer, EPA, Subject: Letter to Peer Review Panel, with 1 attachment |
| 470 | 09709-09711 | 6/20/2002 | Attachment 1: Peer review letter |
| 471 | 09712-09712 | 6/17/2002 | EMail from Shelley Spalding, FWS, to Mark Hicks, WDOE, Subject: Phone record with Rick Barrows, with 1 attachment |
| 472 | 09713-09714 | 6/17/2002 | Attachment 1: Telephone Record with Frederic Barrows regarding Growth temperature studies for bull trout at the USFWS Bozeman Fish Technology Center |
| 473 | 09715-09715 | 5/31/2002 | EMail from Shelley Spalding, FWS, to Christopher Mebane, DEQ, et al., Subject: Mainstem subbasin summary on water quality; Montana bull trout |
| 474 | 09716-09716 | 5/22/2002 | EMail from John Palmer, EPA, to Dave Mabe, IDEQ, et al., Subject: New Temperature Fact Sheet, with 1 attachment |
| 475 | 09717-09719 | 5/22/2002 | Attachment 1: Fact Sheet; EPA to Issue Second Draft of Regional Water Temperature Guidance for Public Review, May 2002 |
| 476 | 09720-09721 | 5/15/2002 | EMail from Christopher Mebane, DEQ, to Don Essig, DEQ, et al., Subject: Bull Trout literature, with 2 attachments |
| 477 | 09722-09764 | 5/15/2002 | Attachment 1: Empirical Evaluation of Temperature Effects on Bull Trout Distribution in the NW Final Report, February 16, 1999 |
| 478 | 09765-09858 | 5/15/2002 | Attachment 2: The Relationship between Water Temperature and Bull Trout Distribution and Abundance; B. Gamet Thesis |
| 479 | 09859-09861 | 5/14/2002 | EMail from John Palmer, EPA, to Shelley Spalding, FWS, Subject: New "Straw" Species Life Stage Criteria and Application, with 1 attachment. |
| 480 | 09862-09863 | 5/14/2002 | Attachment 1: Species Life Stage Criteria & Application Straw Option; Draft, for discussion purposes only, May 8, 2002 |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---------------------|------------------|------------------|--|
| 481 | 09864-09866 | 5/13/2002 | EMail from Shelley Spalding, FWS, to Dru Keenan, EPA, Subject: Questions for 5/21/02 meeting, Attachment listed above in 5/14/2002 email message |
| 482 | 09867-09867 | 5/10/2002 | EMail from Dale McCullough, to Jason Dunham, FS et al., Subject: Bull trout re-review for EPA, with 1 attachment |
| 483 | 09868-09903 | 5/10/2002 | Attachment 1: Review of Rationales for Setting Temperature Criteria, Dale McCullough, May 10, 2002 |
| 484 | 09904-09905 | 5/9/2002 | EMail from Shelley Spalding, FWS, to Dru Keenan, EPA, Subject: Bull Trout Panel of Experts |
| 485 | 09906-09906 | 5/9/2002 | EMail from John Palmer, EPA, to Dru Keenan, EPA, et al., Subject: Bull Trout Discussion |
| 486 | 09907-09907 | 5/8/2002 | EMail from Shelley Spalding, FWS, to John Palmer, EPA, Subject: New "Straw" Species Life Stage Criteria and Application, Attachment listed above in 5/14/2002 email message |
| 487 | 09908-09910 | 5/1/2002 | EMail from Stephen Zylstra, FWS, to John Palmer, EPA, Subject: FWS Comments on new proposed guidance |
| 488 | 09911-09911 | 4/17/2002 | EMail from Dru Keenan, EPA to Cathy Tortorici, NOAA, et al., Subject: The Story Behind the Record Runs of Salmon, with 1 attachment |
| 489 | 09912-09919 | 4/17/2002 | Attachment 1: Derek Poon PH D.; Recent record salmon runs, are we out of the woods; April 12, 2002 working draft |
| 490 | 09920-09920 | 4/2/2002 | EMail from Dale McCullough, to Christopher Mebane, DEQ, et al., Subject: Weber heat shock paper, with 1 attachment |
| 491 | 09921-09931 | 4/2/2002 | Attachment 1: Final report to the National Council of the paper industry for air and stream improvement |
| 492 | 09932-09932 | 3/27/2002 | EMail from Dale McCullough, to Christopher Mebane, DEQ, et al., Subject: Bull trout--temp./ration/size/growth, with 1 attachment |
| 493 | 09933-09944 | 3/27/2002 | Attachment 1: Notes on bull trout growth v. temperature at various ration levels, Dale McCullough; 3/26/2002 |
| 494 | 09945-09945 | 1/7/2002 | EMail from Shelley Spalding, FWS, to Susan Martin, FWS, et al., Subject: Bull trout temperature thresholds, with 1 attachment |
| 495 | 09946-09955 | 1/7/2002 | Attachment 1: Draft Charr Guild "Species Life Stage" Recommended Thresholds, 1/7/02 |
| 496 | 09956-09956 | 11/15/2001 | EMail from Debra Sturdevant, DEQ to Jason Dunham, FS, et al., Subject: New paper on bull trout, with 1 attachment |
| 497 | 09957-09968 | 11/15/2001 | Attachment 1: Effect of Temperature on Growth and Survival of Bull Trout with Application of an Improved Method for Determining Thermal Tolerance in Fishes |
| 498 | 09969-09970 | 11/15/2001 | EMail from Jason Dunham, FS, to Debra Sturdevant, DEQ, Subject: New paper on bull trout, with 1 attachment - 2nd attachment is listed above on 11/15/2001 email message |
| 499 | 09971-09971 | 11/15/2001 | Attachment 1: Predicted probability of occurrence small juvenile Bull trout |
| 500 | 09972-09974 | 11/6/2001 | EMail from Dru Keenan, EPA, to Pat Larson, Oregon Cattlemen Association, Subject: EPA appendix included as part of the temperature criteria project, with 1 attachment |
| 501 | 09975-09977 | 11/6/2001 | Attachment 1: Letter from EPA to Pat Larson, Oregon Cattlemen Association re- the Appendix to the spatio-temporal technical summary prepared for the development of the Regional Temperature Criteria Guidance |

**Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004**

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---------------------|-----------------------------|-----------------------------|--|
| 502 | 09978-09979 | 10/31/2001 | EMail from Geoffrey Poole, Cornell.edu, to Dru Keenan, EPA, et al., Subject: Case Study Watersheds, with 1 attachment |
| 503 | 09980-09980 | 10/31/2001 | Attachment 1: Umatilla and Chiwawa River Watersheds |
| 504 | 09981-09981 | 10/29/2001 | EMail from John Palmer, EPA, to Cathy Tortorici, NOAA, et al., Subject: Temperature public notice/fact sheet, with 1 attachment |
| 505 | 09982-09985 | 10/29/2001 | Attachment 1: EPA Issues Draft Temperature Guidance |
| 506 | 09986-09986 | 10/23/2001 | EMail from John Palmer, EPA. to Cathy Tortorici, NOAA, et al., Subject: Resend of Temperature Guidance Appendix A & B, with 2 attachments |
| 507 | 09987-09992 | 10/23/2001 | Attachment 1: Appendix A, Recommend EPA Temperature Thresholds for use in Establishing Thermal Potential and Species Life State Numeric Criteria |
| 508 | 09993-10007 | 10/23/2001 | Attachment 2: Appendix B, Recommended Process to Establish Thermal Potential Numeric Criteria for Temperature Based on Multiple Lines Evidence |
| 509 | 10008-10008 | 10/18/2001 | EMail from John Palmer, EPA, to Cathy Tortorici, NOAA, et al., Subject: Proposed Temperature Guidance, with 1 attachment |
| 510 | 10009-10020 | 10/18/2001 | Attachment 1: Proposed EPA Region 10 Guidance for State and Tribal Temperature Water Quality Standards, Public Review Proposal 10/18/01 |
| 511 | 10021-10021 | 10/9/2001 | EMail from John Palmer, EPA, to Cathy Tortorici, NOAA. et al., Subject: FWS comments on draft temperature guidance, with 1 attachment |
| 512 | 10022-10034 | 10/9/2001 | Attachment 1: FWS comments to draft temperature guidance |
| 513 | 10035-10035 | 10/9/2001 | EMail from John Palmer, EPA, to Cathy Tortorici, NOAA, et al., Subject: Temperature Guidance Transmittal Letter & Issues, with 1 attachment |
| 514 | 10036-10036 | 10/9/2001 | Attachment 1: Transmittal Letter for public review of draft EPA Region 10 Guidance for State and Tribal Temperature Water Quality Standards |
| 515 | 10037-10037 | 9/27/2001 | EMail from John Palmer, EPA, to Cathy Tortorici, NOAA, et al., Subject: 3rd Draft of EPA R10 Proposed Temperature Guidance, with 1 attachment |
| 516 | 10038-10048 | 9/27/2001 | Attachment 1: EPA Region 10 Guidance for State and Tribal Temperature Water Quality Standards; 3rd Draft 9/27/01 |
| 517 | 10049-10049 | 8/10/2001 | EMail from Geoffrey Poole, Cornell Edu, to Dru Keenan, EPA, et al., Subject: Final Synthesis, with 1 attachment |
| 518 | 10050-10073 | 8/10/2001 | Attachment 1: Technical Synthesis, Scientific Issues relating to temperature criteria for Salmon, Trout, and Char native to the Pacific NW, August 1, 2001 |
| 519 | 10074-10074 | 8/10/2001 | EMail from Geoffrey Poole, Cornell Edu, to Dru Keenan, EPA, et al., Subject: Response to Oregon Forest Industries Council/Washington Forest Protection Association with 1 attachment |
| 520 | 10075-10079 | 8/10/2001 | Attachment 1: Response to Oregon Forest Industries Council/Washington Forest Protection Association comments |
| 521 | 10080-10080 | 8/2/2001 | EMail from Sally T Sauter, USGS, to Dru Keenan, EPA, et al., Subject: Smoltification--from Wally Zaugg, with 1 attachment |
| 522 | 10081-10085 | 8/2/2001 | Attachment 1: Effect of Temperature on Parr-Smolt Transformation in Pacific Salmonids |
| 523 | 10086-10086 | 7/12/2001 | EMail from Jason B Dunham, FS to Munthank, FS, et al., Subject: Bull trout and temperature - final report, with 1 attachment |
| 524 | 10087-10161 | 7/12/2001 | Attachment 1: Models to predict suitable habitat for juvenile bull trout in Washington state, Final Report, July 15, 2001 |
| 525 | 10162-10163 | 6/6/2001 | EMail from Jeffrey Lockwood, NOAA, to Dru Keenan, EPA, Subject: NMFS' views on fish distribution, with 1 attachment |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|--|------------------|------------------|--|
| 526 | 10164-10167 | 6/6/2001 | Attachment 1: Consideration of Accessible, Inaccessible, Unoccupied and Historic Habitat in NMFS Designation of Critical Habitat |
| 527 | 10168-10168 | 3/13/2001 | EMail from Dru Keenan, EPA to Dru Keenan, EPA, et al., Subject: Names of new Peer Reviewers, with 3 attachments |
| 528 | 10169-10170 | 3/13/2001 | Attachment 1: Peer Review Panel for EPA Region 10 Stream Temperature Criteria |
| 529 | 10171-10171 | 3/13/2001 | Attachment 2: Peer Review Panel; 02-13-01 |
| 530 | 10172-10172 | 3/13/2001 | Attachment 3: Peer Review Panel; 02-13-01 |
| 531 | 10173-10173 | 2/15/2001 | EMail from John Palmer, EPA to Cathy Tortorici, NOAA, et al., Subject: Final Updated Fact Sheet, with 1 attachment |
| 532 | 10174-10175 | 2/15/2001 | Attachment 1: EPA February 2001, Update; Pacific NW Water Quality Temperature Criteria Guidance |
| 533 | 10176-10176 | 1/5/2001 | EMail from Dale McCullough, Columbia River Inter-Tribe, to Christopher Mebane, DEQ, et al., Subject: 2 new publications |
| 534 | 10177-10177 | 9/22/2000 | EMail from Sherri Johnson to Elizabeth Materna, FWS, Subject: RE: EPA temperature project peer review, with 1 attachment |
| 535 | 10178-10185 | 9/22/2000 | Attachment 1: Stream Temperature Bibliography |
| 536 | 10186-10186 | 7/5/2000 | EMail from Christopher Mebane, DEQ, to Debra Sturdevant, DEQ, et al., Subject: Stream Temperature Report, with 2 attachments |
| 537 | 10187-10202 | 7/5/2000 | Attachment 1: Forest Science Project, Regional Assessment of Stream Temperatures across Northern California and their Relationship to various Landscape-Level and Site-Specific Attributes |
| 538 | 10203-10223 | 7/5/2000 | Attachment 2: Draft Issues related to Temperature Measurement and Monitoring, May 25, 2000 |
| Temperature Project Documents | | | |
| 539 | 10224-10272 | 3/11/2003 | Draft EPA Region 10 Guidance for Pacific NW State and Tribal Temperature Water Quality Standards |
| 540 | 10273-10318 | 2/14/2003 | Draft EPA Region 10 Guidance for Pacific NW State and Tribal Temperature Water Quality Standards |
| 541 | 10319-10328 | 9/11/2002 | Bull Trout Temperature Criteria Peer Review Panel |
| 542 | 10329-10331 | 10/16/2002 | EPA Regional Water Temperature Guidance, October 2002 |
| 543 | 10332-10369 | 10/10/2002 | 2nd Draft EPA Region 10 Guidance for Pacific NW State and Tribal Temperature Water Quality Standards |
| 544 | 10370-10399 | 8/29/2002 | 2nd public review Draft EPA Region 10 for State and Tribal Temperature Water Quality Standards |
| 545 | 10400-10423 | 6/18/2002 | 2nd Draft EPA Region 10 Guidance for State and Tribal Temperature Water Quality Standards |
| 546 | 10424-10424 | 6/13/2001 | Bull Trout Locations by Stream Reach in Oregon |
| 547 | 10425-10459 | Oct-01 | Draft EPA Region 10 Guidance for State and Tribal Temperature Water Quality Standards |
| 548 | 10460-10460 | 6/27/2000 | Handwritten Notes, unknown author |
| 549 | 10461-10469 | No Date | Oregon Temperature Criterion for T & E Species |
| 550 | 10470-10476 | No Date | Figure 1- Growth of bull trout in relation to temperature at full ration |
| 551 | 10477-10477 | No Date | Anticipated Workload |
| Second Supplemental Administrative Record, dated April 22, 2009 | | | |
| 552 | 10478-10482 | 2/23/2004 | EMail from Jeff Kopf, EPA, to Elizabeth Materna, FWS, et al., Subject: FWS Revised Incidental Take Statement (ITS), with 1 attachment |
| 553 | 10483-10484 | 2/23/2004 | Attachment: Effect of the Take |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---------------------|------------------|------------------|---|
| 554 | 10485-10500 | 12/12/2003 | Draft of Section of Overview of Water Quality Standards from Biological Evaluation |
| 555 | 10501-10541 | 12/11/2003 | Draft of Section 5.0 Analysis of Effects, of the Biological Evaluation |
| 556 | 10542-10558 | 11/28/2003 | Proposed Action Section |
| 557 | 10559-10559 | 11/25/2003 | Email from MaryLou Soscia, EPA, to Elizabeth Materna, FWS, Subject: Preliminary Draft List - Clarifications/Interpretations in DEQ Rule Attachment withheld: Deliberative |
| 558 | 10560-10560 | 11/20/2003 | Email from Jeff Lockwood, NOAA, to Robert Anderson, NOAA, et al., Subject: Preliminary Draft List - Clarifications in DEQ Rule Attachment withheld: Deliberative |
| 559 | 10561-10561 | 11/18/2003 | Email from Dru Keenan, EPA, to Elizabeth Materna, FWS, et al., Subject: Notes from 11.17. call with FWS, NOAA and EPA Attachment withheld: Deliberative |
| 560 | 10562-10562 | 10/21/2003 | Email from Dru Keenan, EPA, to Steve Ellis, Tetra Tech, et al., Subject: Notes for Conference Call on Biological Assessment for OR Proposed Rule Attachment withheld: Deliberative |
| 561 | 10563-10563 | 10/17/2003 | Email from Dru Keenan, EPA, to Steve Ellis, Tetra Tech, et al., Subject: Comments on 10/6/03 draft Biological Assessment 2 Attachments withheld: Deliberative |
| 562 | 10564-10564 | 10/7/2003 | Email from Steve Ellis, Tetra Tech, to Robert Anderson, NOAA, et al., Subject: Final Draft Biological Assessment, with 1 attachment |
| 563 | 10565-10709 | 10/7/2003 | Attachment: Draft Biological Assessment |
| 564 | 10710-10710 | 9/18/2003 | Email from Jeff Lockwood, NOAA, to Steve Ellis, Tetra Tech, et al., Subject: Comments on 9-2-03 Draft Biological Assessment, with 1 attachment; 1 Attachment withheld: Deliberative |
| 565 | 10711-10854 | 9/18/2003 | Attachment: Comments on 9/2/2003 Draft Biological Assessment |
| 566 | 10855-10856 | 8/18/2003 | Email from Bob Stuart, Tetra Tech, to Marylou Soscia, EPA, et al., Subject: Draft Effects Analysis for Chinook Salmon, with 1 attachment |
| 567 | 10857-10872 | 8/18/2003 | Attachment: Analysis of Effects in BO |
| 568 | 10873-10877 | 4/11/2003 | Faxed draft letter from NMFS to John Iani EPA Comments on final guidance. Internal US government agencies |
| 569 | 10878-10882 | 2/21/2003 | Email from Susan Burch, FWS, to Jim Muck, FWS, Subject: Final input to EPA on bull trout rearing number |
| 570 | 10883-10885 | 2/18/2003 | Email from John Palmer EPA to Stephen Zylstra FWS, Subject: Bull trout Rearing |
| 571 | 10886-10886 | 2/18/2003 | Email from Stephen Zylstra, FWS, to Ken Berg, FWS et al., Subject: Final Draft of EPA Regional Temperature Criteria Guidance, Attachment Previously Released |
| 572 | 10887-10887 | 2/13/2003 | Email from Stephen Zylstra, FWS, to John Palmer, EPA, Subject: Juvenile Bull Trout Rearing Criteria |
| 573 | 10888-10888 | 12/13/2002 | Email from Don Steffek, FWS, to John Palmer, EPA, Subject: FWS comments on regional temperature guidelines, with 1 attachment |
| 574 | 10889-10893 | 12/13/2002 | Attachment: EPA temperature criteria for bull trout |
| 575 | 10894-10894 | 11/18/2002 | Email from Stephen Zylstra, FWS, to Don Steffek, FWS, Subject: Regional Temperature Criteria Guidance comments Attachment withheld: Deliberative |

Index to Administrative Record for the U.S. Fish and Wildlife Service Biological Opinion
for EPA's Proposed Approval of Revised Oregon Water Quality Standards for
Temperature, Intergravel Dissolved Oxygen, and Antidegradation
February 24, 2004

| Hyperlink | Bate Stamp Range | Date of Document | Description |
|---------------------|------------------|------------------|---|
| 576 | 10895-10896 | 10/16/2002 | EMail from Stephen Zylstra, FWS, to Ken Berg, FWS, et al., Subject: 2nd Draft of EPA's Regional Temperature Criteria Guidance, 2 Attachments Previously Released ; 1 Attachment withheld: Deliberative |
| 577 | 10897-10897 | 12/27/2001 | EMail from Stephen Zylstra, FWS, to Elizabeth Materna, FWS, et al., Subject: Regional Temperature Criteria Briefing Statement Attachment withheld: Deliberative |
| 578 | 10898-10898 | 12/21/2001 | EMail from Stephen Zylstra, FWS, to Cynthia Barry, FWS, et al., Subject: Regional Temperature Criteria Guidance, Attachment Previously Released |
| 579 | 10899-10899 | 3/30/2000 | Email from Sarah Hall, FWS to Stephen Zylstra, FWS, Subject: Recovery question |
| 580 | 10900-10904 | No Date | Draft letter from FWS to EPA commenting on a 10/2/2002 guidance |

ATTACHMENT B

UNITED STATES' NOTICE OF FILING AMENDED
ADMIN. RECORD AND INDEX FOR FWS

| Attachment 1. Log of Excluded Documents | | |
|---|---------------------------|---|
| NWEA Doc # | Date of Document | Description |
| | | |
| | Biological Opinion | |
| 7 | 1/22/2004 | Email from John Palmer, EPA, to Robert Anderson, NOAA, et al., Subject: Conservation Measures Intro Language; 1 pg Reason Withheld: Deliberative/Attorney-client |
| 8 | 1/22/2004 | Email from John Palmer, EPA, to Cathy Tortorici, NOAA, et al., Subject: Revised conservation measure #1; 1 pg Reason Withheld: Deliberative |
| 9 | 12/29/2003 | Email from Jeff Lockwood, NOAA, to John Palmer, EPA, et al., Subject: Biological Evaluation - What to expect, 2 pgs Reason Withheld: Deliberative |
| 10 | 12/17/2003 | Email from Jeff Lockwood, NOAA, to Dru Keenan, EPA, et al., Subject: Dec. 17 NOAA re-draft of EPA measures, with 1 attachment, 1 pg Reason Withheld: Deliberative/Attorney-client |
| 11 | 12/17/2003 | Attachment 1: Dec. 16, 2003 Re-draft of Conservation Measures by Jeff Lockwood, 2 pgs Reason Withheld: Deliberative |
| 14 | 12/5/2003 | Email from Jeff Lockwood, NOAA, to Marylou Soscia, EPA, et al., Subject: Possible Conservation Measures, 3 pgs Reason Withheld: Deliberative |
| 15 | 12/3/2003 | Email from Dru Keenan, EPA to Keith Cohon, EPA, et al., Subject: Very Draft Biological Evaluations for the OR Package, with 1 attachment, 1 attachment released, 1 pg Reason Withheld: Deliberative |
| 16 | 12/3/2003 | Attachment 1: Section 5.0 Analysis of Effects 11/26/03, 65 pgs Reason Withheld: Deliberative |
| 19 | 11/25/2003 | Provisions in Proposed Oregon DEQ water Quality Criteria Needing Clarification or Interpretation, Transmittal email was released, 3 pgs Reason Withheld: Deliberative |
| 21 | 11/20/2003 | Provisions in Proposed Oregon DEQ water Quality Criteria Needing Clarification or Interpretation, Transmittal email was released, 2 pgs Reason Withheld: Deliberative |
| 23 | 11/17/2003 | Conference call notes, Transmittal email was released, 2 pgs Reason Withheld: Deliberative |
| 24 | 11/14/2003 | Email from Jeff Lockwood, NOAA, to Dru Keenan, EPA, et al., Subject: potential consultation issues with 1 attachment, 1 pg Reason Withheld: Deliberative |
| 25 | 11/14/2003 | Attachment 1: Potential Endangered Species Act and Magnuson-Stevens Act (MSA) Consultation Issues, 2 pgs Reason Withheld: Deliberative |
| 26 | 10/29/2003 | Email from Robert Anderson, NOAA, to Jeff Lockwood, NOAA, et al., Subject: Snake River Spawning Criterion, 1 pg Reason Withheld: Deliberative |
| 28 | 10/21/2003 | Notes from EPA Rule Biological Assessment conference Call on Oct 20, 2003, Transmittal email was released, 2 pgs Reason Withheld: Deliberative |
| 30 | 10/17/2003 | EPA Region 10 and Headquarters Comments on 10.6.03 Version of Final Draft Biological Assessment, Transmittal email was released, 2 pgs Reason Withheld: Deliberative |

Attachment 1. Log of Excluded Documents

| NWEA Doc # | Date of Document | Description |
|------------|--|---|
| 31 | 10/17/2003 | NOAA's comments on final draft Biological Assessment, Transmittal email was released, 2 pgs Reason Withheld: Deliberative |
| 32 | 10/17/2003 | Comments from Elizabeth Materna, FWS, on 10/6/03 Final Draft Biological Assessment, Transmittal email was released, 3 pgs Reason Withheld: Deliberative |
| 37 | 9/18/2003 | Comments on 9-2-03 EPA draft biological evaluation by Robert Anderson and Jeff Lockwood, Transmittal email was released, 1 pg Reason Withheld: Deliberative |
| 38 | 8/19/2003 | Email from Dru Keenan, EPA, to Bob Stuart, Tetra Tech, et al., Subject: Draft Effects Analysis for Chinook Salmon, Attachment not pertinent to email message; 2 pgs Reason Withheld: Deliberative |
| 41 | 8/6/2003 | NOAA Briefing Oregon Water Quality Standards Promulgation Update, 2 pgs Reason Withheld: Deliberative |
| 42 | 7/30/2003 | NOAA comments on Aug 6, Where & When Conference Call, 2 pgs Reason Withheld: Deliberative |
| 43 | Temperature Criteria Guidance Project | |
| 44 | 4/21/2003 | Faxed draft letter from FWS to John Iani, EPA on Comments on the final guidance (4/03) with handwritten comments from FWS Regional Office staff; 5 pgs Reason Withheld: Deliberative |
| 46 | Apr-03 | Briefing statement, EPA finalizing guidance, prepared for the Secretary from Gary Fraser, Asst. Dir. FWS, prepared by Stephen Zylstra, FWS; 2 pgs Reason Withheld: Deliberative |
| 47 | 3/24/2003 | Email from Stephen Zylstra, FWS transmitting draft letter to FWS Program Leaders and staff, Includes handwritten notes; 1 pg Reason Withheld: Deliberative |
| 48 | 3/24/2003 | EMail from Stephen Zylstra, FWS, to Wendi Weber, FWS, et al., Subject: EPA Regional Temperature guidance, Attachment withheld above with 03/07/2003 email message; 1 pg Reason Withheld: Deliberative |
| 49 | 3/12/2003 | Briefing for FWS Deputy Regional Director prepared by Stephen Zylstra, FWS. Subject EPA temperature guidance; 7 pgs Reason Withheld: Deliberative |
| 50 | 3/12/2003 | Notes prepared by Stephen Zylstra, FWS, for briefing with Deputy Regional Director, FWS; 1 pg Reason Withheld: Deliberative |
| 51 | 3/7/2003 | EMail from Shelley Spalding, FWS, to Stephen Zylstra, FWS, Subject: Assurance letter for EPA Regional Temperature Criteria Guidance, with 1 attachment; 1 pg Reason Withheld: Deliberative |
| 52 | 3/7/2003 | Attachment 1: Draft letter to EPA regarding comments on the proposed EPA Region 10 Guidance for State and Tri Biological Assessment Temperature Water Quality Standards (April 2003); 2 pgs Reason Withheld: Deliberative |
| 53 | 3/4/2003 | EMail from Stephen Zylstra, FWS, to Jim Muck, FWS, et al., Subject: EPA Regional Temperature Criteria Deputy Regional Director briefing; 3 pgs Reason Withheld: Deliberative |

Attachment 1. Log of Excluded Documents

| NWEA Doc # | Date of Document | Description |
|---------------|---------------------|---|
| 54 | 2/25/2003 | Question and Answer, States/Tribes will define these terms; 1 pg Reason Withheld: Deliberative |
| 56 | 2/19/2003 | EMail from John Al Young, FWS, to Stephen Zylstra, FWS, Subject: Final input to EPA on Bull trout rearing number; 4 pgs Reason Withheld: Deliberative |
| 60 | 2/12/2003 | EMail from Stephen Zylstra, FWS, to Shelley Spalding, FWS et al., Subject: Let's Discuss; issues related to bull trout criteria; 4 pgs Reason Withheld: Deliberative |
| 61 | 2/12/2003 | EMail from Shelley Spalding, FWS, to Elizabeth Materna et al., FWS, Subject: Let's Discuss; issues related to bull trout criteria; 4 pgs Reason Withheld: Deliberative |
| 62 | 2/4/2003 | EMail from Shelley Spalding, FWS, to Elizabeth Materna, FWS, Subject: Clarification on our EPA meeting; 2 pgs Reason Withheld: Deliberative |
| 63 | 1/23/2003 | EMail from John Palmer, EPA, to Shelley Spalding, FWS, Subject: Temperature follow-up issues; 3 pgs Reason Withheld: Deliberative |
| 64 | 1/9/2003 | EMail from Melanie Rowland, NOAA, to Jeff Lockwood, NOAA, Subject: No adverse effect on improved water quality standards; 7 pgs Reason Withheld: Deliberative/Attorney-client |
| 65 | 12/27/2002 | EMail from Jeff Lockwood, NOAA, to Stephen Zylstra, FWS Subject: No adverse effect on improved water quality standards; 4 pgs Reason Withheld: Deliberative |
| 66 | 12/26/2002 | EMail from Stephen Zylstra, FWS, to John Palmer, EPA.. Subject: Help respond to comment: no adverse effect on improved water quality standards; 3 pgs Reason Withheld: Deliberative |
| 69 | 12/9/2002 | EMail from Stephen Zylstra, FWS, to John Palmer, EPA Subject: Form of Service's Endorsement of Temperature Guidance; 3 pgs Reason Withheld: Deliberative |
| 70 | 11/18/2002 | EMail from Shelley Spalding, FWS, to Elizabeth Materna, FWS, Subject: FWS comments on EPA guidance, with 1 attachment; 1 pg Reason Withheld: Deliberative |
| 71 | 11/18/2002 | Attachment 1: November 2002 FWS comments; 2 pgs Reason Withheld: Deliberative |
| 73 | 11/18/2002 | Draft letter to EPA regarding comments on the proposed EPA Region 10 Guidance for State and Tri Biological Assessment Temperature Water Quality Standards; 3 pgs Reason Withheld: Deliberative |
| 74 | 10/30/2002 | Draft letter from NMFS to John Iani, EPA regarding Comments on 10/10/2002 draft guidance; 10 pgs Reason Withheld: Deliberative |
| 76 | 9/27/2002 | Briefing Statement for the Regional Director regarding US EPA Regional Temperature Criteria Guidance; 2 pgs Reason Withheld: Deliberative |
| 77 | 9/25/2002 | EMail from Stephen Zylstra, FWS, to Kemper McMaster, FWS, et al., Subject: Briefing regarding EPA's Regional Temperature Criteria Guidance, with 1 attachment; 1 pg Reason Withheld: Deliberative |

Attachment 1. Log of Excluded Documents

| NWEA Doc # | Date of Document | Description |
|---------------|---------------------|---|
| 78 | 9/25/2002 | Attachment 1: Briefing Statement for the Regional Director regarding US EPA Regional Temperature Criteria Guidance; 2 pgs Reason Withheld: Deliberative |
| 79 | 9/11/2002 | EMail from Stephen Zylstra, FWS, to Kemper McMaster, FWS, et al., Subject: EPA's Regional Temperature Criteria Guidance, Attachment Released; 2 pgs Reason Withheld: Deliberative |
| 80 | 9/11/2002 | EMail from Shelley Spalding, FWS, to Stephen Zylstra, FWS et al., Subject: Revised Temperature Guidance, Attachments Released; 2 pgs Reason Withheld: Deliberative |
| 81 | 8/12/2002 | EMail from Stephen Zylstra, FWS, to Dru Keenan, EPA, Subject: Endangered Species Act (ESA) Assurances; 3 pgs Reason Withheld: Deliberative |
| 82 | 8/5/2002 | EMail from Stephen Zylstra, FWS, to Kemper McMaster, FWS, et al., Subject: EPA's Regional Temperature Criteria Guidance, Attachment Released; 1 pg Reason Withheld: Deliberative |
| 83 | 3/18/2002 | Briefing statement for FWS Regional Director prepared by Stephen Zylstra, FWS, Subject: EPA temperature guidance with handwritten notes by Stephen Zylstra FWS; 2 pgs Reason Withheld: Deliberative |
| 84 | 3/18/2002 | Briefing statement for FWS Regional Director prepared by Stephen Zylstra, FWS, Subject: EPA temperature guidance; 2 pgs Reason Withheld: Deliberative |
| 85 | 1/16/2002 | Draft joint letter from NMFS and USFWS to Randy Smith, EPA, Comments on the 10/31/2201 public review draft guidance; 8 pgs Reason Withheld: Deliberative |
| 87 | 12/27/2001 | Attachment 1: 01/09/2002 Briefing Statement for Assistant Regional Director regarding US EPA Regional Temperature Criteria Guidance; 2 pgs Reason Withheld: Deliberative |
| 89 | 11/7/2001 | Handwritten notes by Elizabeth Materna, FWS; 1 pg Reason Withheld: Deliberative |
| 90 | 9/26/2001 | Handwritten notes by Elizabeth Materna, FWS; 1 pg Reason Withheld: Deliberative |
| 91 | 7/25/2000 | Handwritten notes of Stephen Zylstra FWS regarding internal agency discussion of Regional Temperature Project; 2 pgs Reason Withheld: Deliberative |
| 92 | 6/27/2000 | Handwritten notes of Stephen Zylstra FWS Regional Temperature Criteria; 3 pgs Reason Withheld: Deliberative |
| 93 | 3/30/2000 | Handwritten notes of Stephen. Zylstra, FWS Temperature Criteria Meeting notes; 2 pgs Reason Withheld: Deliberative |
| 95 | 10/22/1999 | Handwritten notes by Stephen Zylstra, FWS Water Temperature Criteria Meeting; 3 pgs Reason Withheld: Deliberative |
| 96 | No Date | Handwritten notes by Elizabeth Materna, FWS, Moderately Cold Water Guild; 1 pg Reason Withheld: Deliberative |
| 97 | No Date | Handwritten notes by Elizabeth Materna, FWS, Technical team meeting; 2 pgs Reason Withheld: Deliberative |
| 98 | No Date | Temperature as a factor in bull trout listing; 1 pg Reason Withheld: Deliberative |

Attachment 1. Log of Excluded Documents

| NWEA Doc # | Date of Document | Description |
|------------|---|---|
| 99 | No Date | Notes for 3/18/2002 briefing with FWS Regional Director; 1 pg Reason Withheld: Deliberative |
| 100 | No Date | Notes for 3/18/2002 briefing with FWS Regional Director with handwritten notes by Stephen Zylstra, FWS; 1 pg Reason Withheld: Deliberative |
| 102 | Documents in EPA Record with handwritten notes for authors understanding and clarification | |
| 103 | 1/16/2003 | Possible Changes to Temperature Guidance with Handwritten notes by Stephen Zylstra, FWS; 7 pgs Reason Withheld: Deliberative |
| 104 | 1/16/2003 | Possible Changes to Temperature Guidance with Handwritten notes by Elizabeth Materna, FWS; 6 pgs (document is dated 01/16/2002; we believe incorrect date) Reason Withheld: Deliberative |
| 105 | 5/2/2002 | Bull Trout Criteria for Juvenile Rearing with Handwritten notes by Elizabeth Materna, FWS; 1 pg Reason Withheld: Deliberative |
| 106 | 4/18/2002 | Species Life Stage Application Options Issues/Assumptions for All Options with Handwritten notes by Elizabeth Materna, FWS; 4 pgs Reason Withheld: Deliberative |
| 107 | 9/19/2001 | Table 1. How Cold with Handwritten notes by Elizabeth Materna, FWS; 1 pg Reason Withheld: Deliberative |
| 108 | 7/28/2000 | Proposed Revision for Project Goal Statement and Technical Interpretation with Handwritten notes by Elizabeth Materna, FWS; 1 pg Reason Withheld: Deliberative |
| 109 | 3/29/2000 | Cumulative Risk Initiative (NMFS) Figure IV-12 graph with Handwritten notes by Elizabeth Materna, FWS; 1 pg Reason Withheld: Deliberative |
| 110 | 1/20/2000 | Goal Statement, Dale McCullough, CRTFC. Handwritten notes by Elizabeth Materna, FWS; 4 pgs Reason Withheld: Deliberative |
| 111 | No Date | Pacific Northwest Water Quality Temperature Criteria Guidance Workshop: Presentation on the Technical Workgroup Synthesis Paper, with handwritten notes by Elizabeth Materna, FWS; 18 pgs Reason Withheld: Deliberative |
| 112 | No Date | Table 3. Recommended criteria that apply to Summer Max Temperatures with Handwritten notes by Elizabeth Materna, FWS; 1 pg Reason Withheld: Deliberative |
| 113 | No Date | Policy Goal and Technical Goals with handwritten notes by Elizabeth Materna, FWS; 2 pgs Reason Withheld: Deliberative |
| 114 | No Date | Population Level Characteristics with handwritten notes by Elizabeth Materna, FWS; 3 pgs Reason Withheld: Deliberative |
| 115 | No Date | Appendix B. Presentation with Handwritten notes by Elizabeth Materna, FWS; 6 pgs Reason Withheld: Deliberative |
| 116 | No Date | Recovery Target Issue with Handwritten notes by Stephen Zylstra, FWS; 1 pg Reason Withheld: Deliberative |
| 117 | No Date | Juvenile Rearing MDMT 12 °C (Max Daily Max Temp) with Handwritten notes by Elizabeth Materna, FWS; 4 pgs Reason Withheld: Deliberative |